

**Finding that Lead Emissions from
Aircraft Engines that Operate on Leaded
Fuel Cause or Contribute to Air Pollution
that May Reasonably Be Anticipated to
Endanger Public Health and Welfare**

Response to Comments

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Assessment and Standards Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

Foreword

EPA's proposal titled "Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare" was signed by Administrator Michael Regan on October 7, 2022. A pre-publication version of the proposal was made available on EPA's website on that date, prior to publication in the Federal Register on October 17, 2022 (87 FR 62753-62781).¹ The Federal Register notice for the proposal indicated that the public comment period for the proposed action would remain open until January 17, 2023. The EPA held a public hearing on November 1, 2022, and 43 individuals testified. The hearing testimony transcript is publicly available in the docket for this action.

This Response to Comments (RTC) document is a compilation of public comments provided at the hearing and those submitted to the public docket for this action (Docket ID No. EPA-HQ-OAR-2022-0389) and includes the EPA's responses to these comments. Some aspects of our responses appear in the final notice for this action and are incorporated by reference in this document.

The original documents submitted by commenters, including any attachments, footnotes, tables, and figures are included in the docket. EPA received more than 53,000 written comments on this proposal. Of the written comments, 4 documents are mass mail letters individually sent by, or representing through signature, over 53,000 commenters. There are also an additional 641 individual posted comments. The EPA included one example comment for each of the mass mail comments. If a commenter provided additional, unique text in addition to the form letter, the EPA included comment excerpts for the unique portion of each comment and inserted "[FL TEXT]" where the form letter text appeared in the original submission.

This document is organized by comment topic. An individual comment or part of a comment may be reproduced in more than one section of this document if it contains comments on more than one aspect of an issue. Comments from testifiers were included in the appropriate section for that topic in this document. Appendix A contains a list of acronyms used in this document, Appendix B contains the table of commenters on this action, and Appendix C contains the verbatim comments to which the EPA responds in Sections 1.1 and 1.2 of this document.

The responses presented in this document are intended to provide additional support for the rationale and responses to comments that appear in the final notice for this action and to address comments not discussed in the preamble to the final findings. To the extent there is any confusion or apparent inconsistency between this Response to Comments document and the Federal Register notice for the final action ("final notice"), the final notice itself remains the definitive statement of the rationale for the final action. This document, together with the final notice and the information contained in the Technical Support Document, should be considered collectively as EPA's response to all of the significant comments submitted on the proposal.

The EPA has taken steps to ensure comments and comment excerpts are presented in this document verbatim. However, every original comment is available in the docket for the rulemaking action and is the most accurate reflection of its contents. When individual comments raise multiple issues addressed in different sections of this document, they may be split up and/or repeated in whole or in part below. We also note that any grammatical, spelling, or typographical errors that were present in the comments and comment excerpts were not corrected in this document.

References to the docket for this action refer to docket EPA-HQ-OAR-2022-0389.

¹ EPA (2022) Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare 87 FR 62753 (October 17, 2022).

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Section 1. General Comments

The comments summarized in this section express general support for or opposition to the proposal and/or contain opinions or statements about issues but without detailed data, information, or comment relating to specific aspects of the proposal or the EPA's supporting analyses. Appendix C contains a list of the docket identification numbers for comments submitted to the docket that are summarized in Section 1.

1.1. General Support for the Proposal

Many individuals and organizations who commented on the proposal make general statements that support or strongly support the proposed action. Many comments included in this category provide some additional reasons for why they support the proposed action. Many state their concerns about the effects of lead, with some commenters particularly highlighting concerns about effects on children or on their community, while some mention their concerns about the public health impacts of lead emissions from aircraft operating on leaded fuel, sometimes at airports near to the commenters. In their statements of support, many commenters also reference the fact that over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate. Several commenters note that aircraft emissions of lead are the dominant source of lead entering the air and that children are particularly vulnerable to the impacts of lead. Many of the commenters who indicate their support for the endangerment finding note that children in poor communities, and often Black children, are more likely to be exposed to lead, while other supportive commenters state their view that there exists an economic disparity between those that operate aircraft and those exposed to the emissions. Other commenters express their view that there is a need for EPA to reduce or eliminate lead emissions from aircraft as quickly as possible, or to work with FAA to do so, and some additionally voice frustration that the EPA has taken too long to address lead in aviation fuel. A number of commenters who indicate their support for the proposed action express surprise that leaded avgas is still in use given the ban on leaded gasoline for onroad sources. Some commenters note that there are unleaded fuels available that would immediately reduce lead emissions from piston-engine aircraft. Some of these comments state support for comments that have been offered by others in support of the endangerment finding.

Response to Comments in General Support for the Proposal

The EPA acknowledges the general statements of support from commenters for finalizing the endangerment and cause or contribute findings. As both of these findings are often collectively referred to as the "endangerment finding," EPA understands these general comments supporting finalizing the "endangerment finding" as supporting finalizing both findings, unless it is clear from context that the comment intended to address the endangerment finding separate from the cause or contribute finding.

After consideration of public comments and other relevant information in the record for this action, EPA is finalizing these findings, for the reasons described in the final notice for this action. As described in the notice for this final action, the Administrator finds that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act (CAA). The Administrator also finds that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the CAA. We further note that some of the issues raised in a general way in the comments

addressed in this section are addressed in greater detail in later sections of this RTC document. See Sections 5 and 6 of this document for responses to comments related to the endangerment finding and cause and contribute finding, respectively. See Section 4 for responses to comments related to the children and lead emissions from aircraft. See Section 3 for responses related to environmental justice. See Section 7 for responses related to the EPA's legal authority and to comments requesting a ban of lead from aviation gasoline and see Sections 7 and 8.3 for responses related to working with FAA. See Section 6 for responses on the dominant source of lead.

1.2. General Opposition to the Proposal

Some commenters express general statements of concern and opposition to the proposed endangerment and cause or contribute findings. Some commenters also provide more detailed comments that are included in, and responded to, in other sections of this RTC document, including concerns about the EPA's regulatory authority, suggestions that lead emissions from aircraft do not cause or contribute to lead air pollution, comments regarding concerns about fuel availability and operational safety if lead were to be removed from aviation fuel, as well as concerns regarding the disruption of business and other aviation-related activities should lead be removed from aviation fuel.

Response to Comments in General Opposition to the Proposal

EPA acknowledges these comments expressing general opposition to the proposed action. After consideration of public comments and other relevant information in the record for this action, EPA is finalizing these findings, for the reasons described in the final notice for this action. As explained in the preamble to this final action, the Administrator finds that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act (CAA). The Administrator also finds that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the CAA. None of the general objections or concerns asserted in the comments offer persuasive reasons not to finalize these findings, and many of these objections or concerns are substantively the same as those raised in comments addressed in greater detail in the final notice and in other sections of this RTC document. We further note that to the extent that these comments offer generalized objections or concerns without explaining what aspect of the proposal should be finalized differently or providing reasons or support for their points, the Agency does not consider them to be adverse to this action, and thus they require no response. We further note that many of these comments raise concerns and objections that are beyond the scope of the action the Agency proposed and is finalizing. These out-of-scope comments include, for example, those raising concerns or objections related to potential approaches for regulation of leaded aviation fuel or aircraft engine emissions standards. As described in Sections III.A and III.D of the final notice as well as elsewhere in this RTC document, in this action the EPA is addressing the predicate to regulatory action under CAA section 231 by making an endangerment and a cause or contribute finding in proceedings that are separate and distinct from any follow-on regulatory action; the EPA neither proposed, requested comment on, nor is finalizing any regulatory provisions in this action.

Section III.D of the final notice for this action includes EPA responses to commenters who assert that the EPA does not have authority under CAA section 231(a)(2)(A) to either find that lead air pollution may reasonably be anticipated to endanger the public health and welfare or to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger the public health and welfare. Section III.D also includes EPA responses to other commenters who assert that the EPA does not have the legal authority to proceed with this proposal or regulate aviation fuel. Additional responses on comments related to the EPA's legal authority are found in Section 7 of this RTC document.

Section 5 of this RTC document responds to comments related to the Administrator's finding that lead air pollution may reasonably be anticipated to endanger the public health and welfare based on the consideration of extensive scientific evidence described in Section IV of the final notice.

Section 6 of this RTC document responds to comments related to the Administrator's finding that engine emissions of the lead air pollutant from covered aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare.

Section 8.4 of this RTC document responds to comments asserting that certain impacts to the aviation industry would occur should lead be removed from aviation fuel, as well as those regarding commenters' assertions about anticipated costs and impacts of future standards and about how those impacts are distributed. As explained in Section 8.4 and the final notice for this action, though the EPA and the FAA become subject to certain duties due to the issuance of these final findings, we emphasize that the endangerment and cause or contribute findings, do not themselves impose burdens or costs on any non-federal entity.

We address comments related to asserted concerns about fuel availability and operational safety, and industry research and development of unleaded aviation fuel in Section 8.5 of this document.

Section 2. Comments on the Use of Piston-Engine Aircraft in Alaska

Comment Number: EPA-HQ-OAR-2022_0389-0517-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Disparities remain along racial, ethnic, and socioeconomic lines when it comes to lead exposure in America. In particular, Alaska Natives are in close proximity to some airports where covered aircraft operate.

Comment Number: EPA-HQ-OAR-2022-0389-0683-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Chris Bailey

Organization:

Excerpt Text:

I am a personal and professional pilot, residing in the neighborhood adjacent Merrill Field, AK--one of the highlighted airfields--and as a result, am closely affected by the proposed rule. On a daily basis, I operate piston-driven single/multi-engine/airplane/helicopters hundreds of miles across the Alaskan region. These aircraft serve multiple purposes: delivery of supplies & personnel for civil/state/federal/military purposes on the basis of humanitarian/environmental research, search and rescue, tourism (a critical element of AK economy), indigenous support, and the list goes on. The infrastructure, fleet, economy, and scale of Alaska aviation cannot survive a shotgun approach to the eradication of leaded AVGAS. It will have crippling effects which I strongly believe are misunderstood by residents of the Lower 48--those whom are unaffected by a way of life "off the road system." As a side note--I have also personally and professionally piloted in the Lower 48, and I feel for those

aviators/companies who are impacted by such a proposed ruling. My comments go beyond protecting the Alaskan "way of life" but for all in the aviation business--both professionals and enthusiasts. It can't be forgotten that what makes safe and competent professional pilots are those who hone their skills exhaustively in General Aviation.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

CSA appreciates the opportunity to offer comments during the public comment period and remains open to work with EPA and FAA going forward on this very important matter. CSA sees leaded Aviation Gasoline (AvGas) as an important element in the safe operation of the approximately 222,600 piston engine aircraft in the United States today, operated by approximately 664,564 certified pilots. General Aviation serves the public daily through a multitude of venues, from training of professional pilots to the support of communities in remote locations, not otherwise served by road systems – such as nearly 80% of the communities in Alaska.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0002

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

Finalization of the rule as proposed without the existence and availability of a viable alternative fuel would turn thousands of piston-engine aircraft in Alaska into scrap, render billions of dollars invested over decades in airport infrastructure useless, devastate Alaska's economy, destroy thousands of jobs, and strand hundreds of Alaskan communities and their residents without transportation or supply alternatives. It would truly be a disaster. Hundreds of Alaskan communities cannot be reached by road and rely on piston-engine aircraft to deliver medicine, fuel, and food. Teachers, state troopers, physicians, dentists, students, contractors, and residents all rely on these same aircraft for access in and out of a community. As one rural resident stated: "If we didn't have our airport, we wouldn't have anything. The airport is a fact of life for living out here in the villages. The airport is our road, highway, ocean - our lifeline."

Comment Number: EPA-HQ-OAR-2022-0389-0244-0003

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

We want to focus on Alaska aviation and our dependence on 100 low lead aviation gasolines (100LL avgas). Alaska encompasses over 365 million acres and is the largest state in the union. Within our vast state, many communities are not on the road system and are only accessible via air travel. A large majority of the aircraft used to serve these small, rural communities are piston-engine aircraft that burn 100LL avgas, due to their ability to land on short, gravel runways. In many locations, large piston-engine aircraft are the only means by which Alaska's residents and businesses can receive freight and fuel. Air travel and air cargo are necessities for sustaining life in rural Alaska. Access to medical facilities and

other essential goods and services typically involve travel by piston-powered aircraft. Aviation is a critical industry in Alaska and employs a notable percentage of state residents. While there are some avgas alternatives that show promise, many concerns exist surrounding the long-term viability of the alternatives in an arctic climate. Several aircraft components (ignition systems, fuel bladders, hoses, and o-rings, among others) have the potential for unintended reliability impacts from alternative fuel options.

There are currently no alternative aircraft suitable for moving cargo and fuel throughout Alaska, and the absence of a comparatively priced substitute fuel available for widespread use will irreparably damage Alaska's ability to provide essential care and services to its residents. Aviation is essential to Alaska, and 100LL avgas is essential to our aviation system. Alaska is concerned about the immediate impact to human health and wellbeing if 100LL avgas becomes unavailable, as the lack of comparatively priced substitute fuel available for widespread use will make goods and services less accessible, if not unavailable, to Alaska's rural communities.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0008

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

Alaska wants to be a part of the solution and is standing by to provide piston-driven operations numbers, community connectivity information, and any other aviation data helpful in quantifying potential impacts. Alaska recognizes the need for piston-driven aircraft to run on unleaded fuel in the long term, and we want to help develop solutions. However, it is critical that any potential solutions do not have disproportionate impact to Alaska residents. We request that any solution be available for widespread use at a comparative cost so as to not adversely impact our rural residents.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

As stated in the letter submitted on our behalf by Earthjustice: Petitioner Alaska Community Action on Toxics ("ACAT") is a 501(c)(3) non-profit public interest environmental health and justice research and advocacy organization, incorporated and headquartered in Anchorage, Alaska. ACAT assists individuals, tribes, and communities to implement effective strategies to prevent or reduce their exposures to toxic substances, protect the ecosystems that sustain them, and hold accountable those responsible for the contamination of their communities. ACAT serves individuals around Alaska, where the vast majority of communities are not accessible by roads and where piston-engine aircraft are used for vital transportation of goods and services. Alaska has hundreds of airports, and over 10,000 planes—approximately 96% of the commercial fleet—registered in Alaska are piston-engine aircraft that use leaded avgas.[Footnote 1: Elwood Brehmer, Industry Offers Avgas Alternatives, FAA Targets 2018 Use, Alaska J. of Comm. (July 16, 2014), <https://www.alaskajournal.com/business-and-finance/2014-07-16/industry-offers-avgas-alternatives-faa-targets-2018-use>.]

Many of ACAT's constituents are Alaska Natives, who EPA found make up nearly half the population living within 500 meters of one of the hundreds of Alaska airports, despite constituting only 15% of the state population. ACAT has a strong interest in protecting its constituents by eliminating exposures to lead from piston-engine aircraft emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

In addition to exposures from piston-engine aircraft emissions, Alaska Natives and other Alaska residents may also be exposed to multiple sources of lead including large-scale metals mining, consumption of subsistence animals hunted with lead ammunition, fish contaminated with leaded fishing weights, lead from paint in older homes, and drinking water sources. These additional exposures to lead add to the cumulative adverse effects of lead exposure from avgas experienced by Alaska Natives and other Alaska residents.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

Lead has been detected in the air and soil around Merrill Field in Anchorage, Alaska. Data collected from an air quality station near one of the runways between 2011-2012 showed that lead levels ranged from 0.001 to about 0.115 parts per billion (ppb) on any given day depending on the number of flights on the runway (EPA, 2015). This is far from a comprehensive assessment and additional monitoring is necessary here as well as at airports throughout the state.

Response to Comments Regarding the use of Piston-Engine Aircraft in Alaska

Some commenters, particularly including individuals and organizations in Alaska, provide comments that focus on several Alaska-specific issues and concerns. Some of these comments provide background information about the transportation system in Alaska and the use of piston-engine aircraft in Alaska, and some make assertions regarding the importance of piston-engine aircraft and use of leaded avgas until a viable alternative fuel is available. Others raise concerns regarding the potential for Alaska Natives and other Alaska residents to be exposed to lead.

EPA acknowledges these comments received from individuals and organizations in Alaska, which focus on several Alaska-specific issues and concerns and provides the following responses.

Some commenters who support this action provide background information on the relatively high percentage of Alaska Natives living near airports where covered aircraft operate and raised concerns regarding the disproportionate impact of lead emissions on those populations. The EPA acknowledges these comments. While these considerations are not part of the basis for the final action, for purposes of public information, the EPA notes that in both the final notice and the Technical Support Document for this action, the EPA describes analyses we conducted that provide information about the disparity in residential location for some low-income populations, people of color and some indigenous peoples in the United States, particularly Alaska Natives, with regard to their proximity to some airports where covered aircraft operate. Further details on this analysis and its results are available in Section II.A.5 of the final notice. As described in Section II.A.5 of the final notice for this action, the EPA evaluated environmental justice consistent with the EPA 2016 Technical Guidance. Discussion related to Executive Order 12898 is provided in Section IV.J of the final notice. However, the final decisions in this action are based on

EPA’s consideration under CAA section 231(a)(2)(A) of potential risks to public health and welfare from the lead air pollution, as well as its evaluation of whether emissions of lead from engines in covered aircraft contribute to that air pollution. The basis for these findings is described in Sections IV and V of the final notice. To the extent that these comments suggest that the EPA consider this information as part of the final findings, the EPA declines, as such consideration is not necessary. The information summarized in Sections IV and V of the final notice, provide sufficient grounds to support the final findings. Further responses to comments regarding environmental justice can be found in Section 3 of this RTC document.

One commenter specifically mentions concerns about other sources of lead that add to the “cumulative adverse effects of lead exposure from avgas experienced by Alaska Natives and other Alaska residents.” The EPA responds to comments regarding cumulative exposures in Section 5.1 of this RTC document.

Some commenters provide background information in their comments regarding Alaska’s unique, off-road transportation structure, where many communities rely solely on air travel for essential transport of goods, services, and people. Commenters mention that most of the aircraft used to serve these small, rural communities in Alaska are piston-engine aircraft that use leaded aviation fuel, and some raise concerns about fuel availability and safety issues should leaded aviation fuel be banned. Specifically, one commenter states that “it is critical that any potential solutions do not have disproportionate impact to Alaska residents,” and requests that “any solution be available for widespread use at a comparative cost so as to not adversely impact our rural residents.” To the extent these comments express concerns about any rulemaking that could lead to the elimination of leaded avgas before a comparatively priced substitute fuel is available for widespread use, we respond to the comments in Section III.D of the final notice for this action. In response to the commenters’ statements regarding potential impacts of solutions on Alaska residents, the EPA responds that these concerns are beyond the scope of this action and thus require no response. As described in Sections III.A and III.D of the final notice, as well as elsewhere in this RTC document, in this action, the EPA is addressing the predicate to regulatory action under CAA section 231 by making an endangerment and a cause or contribute finding in proceedings that are separate and distinct from any follow-on regulatory action.

With regard to concerns about impacts to the Alaskan aviation industry should lead be removed from aviation fuel, including economic and related considerations, we emphasize as described in the final notice of this action, while the EPA and the FAA become subject to certain duties due to the issuance of these final findings, the final findings do not themselves apply new requirements to entities other than the EPA and the FAA. See Sections 7, 8.4, and 8.5 of this RTC document for further responses to these concerns.

Some comments raise concerns about fuel availability and operational safety, and industry research and development of unleaded aviation fuel. We address these points in Section 8.5 of this RTC document. One commenter states that additional monitoring is needed at airports throughout Alaska. The response to comments asserting that additional monitoring needed at airports are addressed in Section 8.2.1.

Section 3. Comments Regarding Environmental Justice

Comment Number: EPA-HQ-OAR-2022-0389-0224-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: New Jersey Progressive Equitable Energy Coalition (NJPEEC)

Excerpt Text:

NJPEEC supports the Environmental Protection Agency’s (“EPA’s”) Proposed Finding That Lead

Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare (hereinafter “Endangerment Finding”). [Footnote 2: Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, 87 Fed. Reg. 62,753 (Oct. 17, 2022) (to be codified at 40 C.F.R. Parts 87, 1031, and 1068), <https://www.govinfo.gov/content/pkg/FR-2022-10-17/pdf/2022-22223.pdf>.] However, NJPEEC seeks to bring to EPA’s attention the specific impact that lead has on New Jersey’s Overburdened Communities (“OBCs”) and to encourage EPA to prioritize these communities in future actions.[Footnote 3: N.J.S.A. 13:1D-158(2).] OBCs are defined under New Jersey’s 2020 Environmental Justice Law (“EJ Law”) as the following:

[A]ny census block group, as determined in accordance with the most recent United States Census, in which (1) at least 35 percent of the households qualify as low-income households; (2) at least 40 percent of the residents identify as minority or as members of a State recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency. [Footnote 4: Id.]

Specifically, NJPEEC Chairman Marcus Sibley and the coalition’s steering committee of dedicated NJ climate and justice leaders, including Maria Santiago-Valentin, urge EPA to (1) prioritize Environmental Justice Communities, like New Jersey’s OBCs, in its potential future actions on lead air emissions from piston-engine aircraft consistent with EPA’s FY 2022–2026 Strategic Plan (“EPA Strategic Plan” or “EPA 2022–2026 Strategic Plan”),[Footnote 5: See FY 2022-2026 EPA Strategic Plan, U.S. Env’t Prot. Agency (Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.] and (2) to ensure ongoing air monitoring in all communities surrounding airports that service piston-engine aircrafts to prove that lead air emissions are decreasing in OBCs. New Jersey’s OBCs and Environmental Justice Communities have been subject to disproportionate lead pollution from leaded aviation fuel, lead service lines bringing contaminated water into their homes, lead paint, and tainted soils. If EPA prioritizes disproportionately impacted communities when it creates and implements new lead air emissions standards, and if EPA can ensure that lead air pollution has decreased in OBCs through increased air monitoring, that would lead to more equitable enforcement of future air emissions standards, and environmental and public health benefits in OBCs and Environmental Justice Communities.

First, we wish to inform EPA about how OBCs are impacted by overall lead exposure in New Jersey. Here, OBCs are not only exposed to lead from the air, but from drinking water sources and homes as well. To protect OBCs, EPA should consider the cumulative impacts from multiple sources of lead exposure that OBCs and families face. One stark example is the Newark Lead Crisis.[Footnote 6: See Eric Davis, *Cleaning the New Jersey Commute: Electrifying Transport as a Step Toward Environmental Justice*, ClimateXChange (Apr. 15, 2021), <https://climate-xchange.org/2021/04/15/cleaning-the-new-jersey-commute-electrifying-transport-as-a-step-toward-environmental-justice/>.] Newark “is home to majority immigrant, Latinx, and Black residents, which has made it especially vulnerable to [environmental and public health] risks and hazards.”[Footnote 7: Id.] Because of its demographic makeup and the environmental and public health stressors experienced by Newark residents, every single block group in the City is classified as an OBC and faces disproportionate impacts of air, water, and soil pollution compared to the rest of the state.[Footnote 8: Environmental Justice Mapping, Assessment and Protection Tool (EJMAP), N.J. Dep’t Env’t Prot., <https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6> (last visited Jan. 10, 2023).] Tests conducted in 2017 revealed that over 10% of Newark homes had concentrations of lead in drinking water that were over two times the levels deemed safe by federal law.[Footnote 9: Eric Davis, *Cleaning the New Jersey Commute: Electrifying Transport as a Step Toward Environmental Justice*, ClimateXChange (Apr. 15, 2021), <https://climate-xchange.org/2021/04/15/cleaning-the-new-jersey-commute-electrifying-transport-as-a-step-toward-environmental-justice/>.] The Newark Lead Crisis was also the subject of a June 2019 lawsuit filed by the Natural Resource Defense Council (“NRDC”).[Footnote 10: Id.] However, as of August 2021, the almost 23,000 lead service lines feeding

drinking water to Newark homes have been replaced by copper pipes. [Footnote 11: Kevin Armstrong, ‘Hallelujah Moment’: How this City Overcame its Lead Crisis, *New York Times* (Aug. 11, 2021), <https://www.nytimes.com/2021/08/11/nyregion/newark-lead-pipes-drinking-water.html>.] While many of Newark’s lead service lines have been replaced, residents are still subject to pollution from the Newark Liberty International Airport. EPA has the opportunity to directly address and improve this source of lead pollution in OBCs like Newark and those around New Jersey that are adjacent to airports and other facilities servicing piston-engine aircrafts.

In addition to having a disproportionate impact on OBCs in New Jersey and Environmental Justice Communities around the U.S., lead poisoning has severe impacts on children—especially children in OBCs. On July 28, 2022, the Subcommittee on Environment of the Committee on Oversight and Reform within the U.S. House of Representatives (the “Committee”) held a session titled “Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children.” [Footnote 12: See *Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children*, U.S. House of Representatives Transcript (July 28, 2022), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf>.] In the opening statement, the Chair of the Committee stated that “lead from the exhaust fumes of private planes or flight schools near [children’s] homes . . . [d]amages every organ and slowly severs neural connections,” leading to “seizures, learning disabilities, and low IQ.” [Footnote 13: *Id.* at 2.] The Chair added that “[l]ead exposure can predict differences in a child’s future income, health, and educational attainment.” [Footnote 14: *Id.*] However, not all people and communities experience the same amount of lead exposure—systemic environmental racism has caused more widespread impacts of lead pollution on families and children in OBCs and Environmental Justice Communities.

In 2020, the Centers for Disease Control and Prevention (“CDC”) found that most of the 2.6 million U.S. families at risk of lead poisoning are Black families. [Footnote 15: Eleesha Lockett, *How Lead Poisoning Disproportionately Affects Black Communities*, *healthline* (Feb. 7, 2022) <https://www.healthline.com/health/lead-poisoning-black-communities>.] The disproportionate impact of lead pollution on Black families and Environmental Justice Communities is fueled by institutionalized redlining [Footnote 16: *Id.* (“With the creation of [the Federal Housing Administration’s ‘Underwriting Handbook’] rating system for neighborhoods came the term ‘redlining,’ in which mortgage appraisers sectioned off the ‘least desirable’ neighborhoods on the map with a red line. In turn, lenders would not approve mortgages in these ‘red’ areas — thus creating a disparity that led to the rapid decline of inner city neighborhoods. As a result of this form of institutionalized racism, thousands of Black communities around the United States became disproportionately affected by the negative impact of environmental racism.”).] and environmental racism, which includes the disproportionate placement of polluting facilities in OBCs. [Footnote 17: *Id.* (“As a result of institutionalized environmental racism, communities in ‘undesirable’ neighborhoods are often exposed to environmental pollutants from places such as: [highways, landfills, waste sites, and even chemical plants]. In addition, many of the houses within these neighborhoods end ”).] The CDC also notes that children are commonly exposed to lead from paint chips, dust, soils, medications, cosmetics, consumer products, and parents who may bring lead home from working in certain industries. [Footnote 18: *Id.*] As a result of the overexposure Black children have to lead, the CDC determined in a 2013 report that Black children had the highest average blood lead levels at 5.6 micrograms per deciliter, which is over twice the level reported for white children—2.4 micrograms per deciliter. [Footnote 19: *Id.*] The 2013 study also found that “children with a blood lead level of 5 micrograms per deciliter [] or higher were at risk of serious adverse health effects.” [Footnote 20: *Id.* (emphasis added).] One of the many opportunities that EPA has to promote environmental justice is to regulate lead air emissions, prioritize reductions of lead air emissions in OBCs, and increase monitoring of air emissions to ensure that the most impacted communities are protected from the severe and highly consequential impacts of childhood lead exposure.

Decreasing lead emissions through EPA’s proposed Endangerment Finding would be consistent with its 2022–2026 Strategic Plan. [Footnote 21: See FY 2022–2026 EPA Strategic Plan, U.S. Env’t Prot. Agency

(Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.] The Strategic Plan outlines six goals, one of which is to “Take Decisive Action to Advance Environmental Justice and Civil Rights.” [Footnote 22: Id. at 29.] To meet this goal, EPA seeks to: (1) “Promote Environmental Justice and Civil Rights at the Federal, Tribal, State, and Local Levels”; (2) “Embed Environmental Justice and Civil Rights into EPA’s Programs, Policies, and Activities”; and (3) “Strengthen Civil Rights Enforcement in Communities with Environmental Justice Concerns.” [Footnote 23: Id. at 29, 32, 36 (describing these objectives, respectively, as objectives 2.1, 2.2, and 2.3).] While these are laudable goals, EPA must take meaningful action in support of EJ communities to actually achieve them. With this Endangerment Finding, EPA has the opportunity to adopt air emissions standards on lead that will directly benefit and promote Environmental Justice at the national, state, and local levels. To ensure that EJ Communities truly feel the benefits of EPA action on this matter, EPA must prioritize lowering lead air emissions in EJ Communities to decrease the cumulative impacts of lead on Black, Brown, Indigenous, and low-income communities in New Jersey and throughout the U.S.

Additionally, Objective 2.2 in EPA’s Strategic Plan includes “[m]aking commitments on [Italics: measurable environmental and public health improvements] in overburdened and underserved communities.” [Footnote 24: Id. at 32 (emphasis added).] EPA could attain this objective by increasing air monitoring of lead in OBCs to collect data on actual lead air emissions reductions in New Jersey’s OBCs, and Environmental Justice Communities around the country. According to EPA’s National Emissions Inventory (“NEI”), the counties in New Jersey that are most impacted by lead air emissions are Bergen, Essex, Union, and Mercer Counties. [Footnote 25: National Emissions: 2017 County Emissions, U.S. Env’t Prot. Agency, https://edap.epa.gov/public/extensions/nei_report_2017/dashboard.html#sector-db (last visited Jan. 10, 2023).] In 2017, these counties experienced the highest airborne lead levels per square mile from aircrafts—approximately 661 pounds in Bergen and Essex Counties; 220 pounds in Union County; and almost 441 pounds in Mercer County. [Footnote 26: Id.] The New Jersey Department of Environmental Protection’s (“DEP’s”) EJ mapping tool, called EJMAP, indicates that the communities surrounding major airports in New Jersey, including Newark Liberty International Airport [Footnote 27: See Newark Liberty International Airport, <https://www.newarkairport.com/> (last visited Jan. 10, 2023).] and the Trenton-Mercer Airport, [Footnote 28: See Mercer County: Trenton-Mercer Airport, N.J. Mercer Cnty., <https://www.mercercounty.org/departments/transportation-and-infrastructure/trenton-mercerairport> (last visited Jan. 10, 2023).] are both adjacent to OBCs. [Footnote 29: Environmental Justice Mapping, Assessment and Protection Tool (EJMAP), N.J. Dep’t Env’t Prot., <https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6> (last visited Jan. 10, 2023).]

EPA should, in conjunction with any proposed lead emissions standards, increase oversight or overall air monitoring in OBCs located near airports. As discussed above, OBCs—and especially Black communities—experience more lead exposure and more of its associated cognitive and developmental impacts. Because of this, EPA should commit to prioritizing OBCs and Environmental Justice Communities by focusing enforcement of future air emissions standards on aircrafts utilizing leaded fuel in those communities, and by increasing air monitoring efforts. Doing so would ensure that OBCs and Environmental Justice Communities feel the benefits of any promulgated lead air emissions standards and regulations first, which should be the case since they are the most severely impacted. Additionally, increasing air monitoring efforts in these communities would provide tangible data and evidence that EPA’s efforts are materially decreasing lead levels in air emissions, and that OBCs are actually benefiting directly from EPA action. These actions would also show that EPA is taking steps toward the Environmental Justice goals outlined in its 2022–2026 Strategic Plan. [Footnote 30: See FY 2022-2026 EPA Strategic Plan, U.S. Env’t Prot. Agency (Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.]

In conclusion, NJPEEC urges EPA to prioritize and increase air emissions monitoring in OBCs and Environmental Justice Communities. OBCs, especially Black communities, experience higher rates of

lead exposure from multiple sources, so EPA should focus on and create standards that are protective of these communities in future actions on lead air emissions. Communities facing the impacts of systemic environmental racism should feel the immediate benefits when EPA takes action on pollution, and acting on lead air emissions is one way that EPA can begin to undo these historic injustices.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

We write on behalf of the Natural Resources Defense Council (NRDC) regarding EPA's proposed endangerment finding for leaded aviation gasoline (avgas). NRDC strongly supports such a finding and urges EPA to finalize the finding as quickly as possible. We also write to uplift the voices of the communities living closest to general aviation airports, including the [*Italics: Close Reid-Hillview Now!*] Coalition, who are often low-income communities and communities of color and who are disproportionately burdened by lead exposure.

NRDC is an international, not-for-profit environmental and public-health group with more than three million members and online activists and a staff of more than 700 lawyers, scientists, and other professionals. NRDC's mission is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends. Consistent with this mission, NRDC works to enforce environmental laws, reduce air and water pollution, and protect the public and our members from health and environmental harm.

NRDC has substantial experience with the issue of lead exposure. It has provided scientific analyses and policy recommendations on eliminating lead contamination in drinking water on numerous occasions at the city, state, and federal level, and NRDC lawyers have litigated to protect communities in Flint, Michigan, Newark, New Jersey, and Pittsburgh, Pennsylvania from high levels of lead in those cities' drinking water. NRDC has also weighed in on the topic of lead emissions from piston-engine aircraft specifically, detailing the harms of such emissions to public health in various forums and urging the EPA in 2010 to implement standards for controlling lead emissions from these aircraft. [Footnote 1: Letter from Avinash Kar, Attorney, NRDC, and Miriam Rotkin-Ellman, M.P.H., Scientist, NRDC, to U.S. EPA (Aug. 27, 2010), https://downloads.regulations.gov/EPA-HQ-OAR-2007-0294-0414/attachment_1.pdf.]

Comment Number: EPA-HQ-OAR-2022-0389-0216-0009

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

Comment Number: EPA-HQ-OAR-2022-0389-0216-0001

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

The Fond du Lac Reservation and the related Ceded Territories are located in northeastern Minnesota, a region with significant metal extraction activities, associated fossil fuel electric generating units, and pulp and paper manufacturing. The Band retains hunting, fishing, and gathering rights on more than 8 million

acres of territory in northeastern Minnesota ceded to the United States government under the Treaties of 1837 and 1854. The Band also exercises Treaty Rights in the 1837 and 1842 Ceded Territories of Wisconsin and Michigan. The area holds significant natural and freshwater resources, including Lake Superior. The Band holds Treatment as an Affected State status under the Clean Air Act § 505(a)(2) for air related activities that take place near the Reservation and/or other tribal lands.

As an indigenous minority population that bears a disproportionate amount of environmental and socioeconomic challenges, it is of primary importance to support efforts that work toward restoring the health of the environment, which in turn will improve the health and welfare of the Band, as a community.

Figure 1: Demonstrated proximity from Cloquet-Carlton County Airport to 2 local schools (upper left) within the boundaries of the reservation; the Fond du Lac Ojibwe School and Fond du Lac Headstart. Also shown are multiple residences and natural areas, including gardens, forests, ponds, streams, and lakes. The orange line on the right hand portion of this map constitutes the nearby portion of the eastern reservation boundary. (Image Source: Google Earth)

As poignantly stated by the EPA in this docket and the 2013 Lead ISA, “there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure.” [Footnote 1: EPA (2013) ISA for Lead. Executive Summary “Effects of Pb Exposure in Children.” pp. lxxxvii-lxxxviii. EPA/600/R-10/075F, 2013] Further referenced in this docket, “Residential proximity to airports implies that there is an increased potential for exposure to lead from covered aircraft engine emissions.” [Footnote 2: EPA Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. Section 4.2.1] As a reservation with a municipal airport (operating since 1942) within its exterior boundaries, and with two schools, tribal housing, and local residences in close proximity to the airport (some less than 1 kilometer), leaded aircraft fuel is of concern for our community (Figure 1).

As evidenced through several mentioned studies, there are risks of adverse human health effects with increased blood lead levels within adult populations: cardiovascular issues like increased blood pressure, hypertension, coronary heart disease, or cardiovascular mortality, as well as cognitive effects such as anxiety, depression, and impacts on the immune system. [Footnote 3: Klemick et al., 2022. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. International Journal of Environmental Research and Public Health. 19(10):5941.] [Footnote 4: EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R-10/075F, 2013] [Footnote 5: EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1-68. EPA, Washington, DC, EPA/600/R-10/075F, 2013.] Native American populations already suffer from disproportionately high rates of these chronic issues, “including double the rate of heart disease compared to other populations, higher rates of obesity, the highest rates of high blood pressure, cholesterol, and Type II diabetes of any racial group in the country.” [Footnote 6:] Children can also be especially vulnerable to the effects of lead exposure. Cognitive effects in children like depression, conduct disorders, anxiety, impulsivity, hyperactivity, and other developmental effects can negatively impact academic performance. [Footnote 7:] While children are still developing, their organ systems may be left especially vulnerable to lead, and some neurocognitive effects of lead on concentration, intellect, and academic achievement may be transient, while other effects may persist into adulthood. [Footnote 4: EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R-10/075F, 2013] [Footnote 8:] Working to reduce lead emissions in the air from covered aircraft would likely help to lower lead exposure in communities around airports and thus help improve the overall health, academic achievement, and quality of life of adults and children living in these areas around the country.

Comment Number: EPA-HQ-OAR-2022-0389-0422-0001

Commenter Type: Private Citizen

Commenter: Gwendolyn Wright

Organization:

Excerpt Text:

Dear EPA, As a Pediatrician I am very concerned about ongoing lead pollution in our country. It is unconscionable that leaded gasoline continues to be used in aircraft. We have banned lead from paint and auto fuel, yet we continue to battle against the legacy that those mistakes have left behind. Every day I prick the fingers of babies to check for lead poisoning that is otherwise invisible. I have seen first hand the effects of lead poisoning. Airports are often in underserved neighborhoods and disproportionately affect those least able to mitigate the effects. Please ban the use immediately.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-004-0001

Commenter Type: Private Citizen

Commenter: Maricela Lechuga

Organization:

Excerpt Text:

Good morning, my name is Maricela Lechuga. I am an airport commissioner at Santa Clara County for the airport Reid-Hillview. I live five blocks away from the airport for over 20 years. This is where I was raised and I have a very large family, I have three brothers and sisters and about 30 cousins just on my mom's side and we mostly all grew up in this neighborhood and it's very heartbreaking to have learned about this lead exposure that me and my family and neighbors have been exposed to for decades. I was so outraged to learn about the lead exposure that when I learned about it last year or a couple of years ago, I initiated a public awareness campaign in 2021 where we mobilized the neighborhood and we went door to door informing the neighbors about the lead issue going on at the airport. And many -- many were -- the majority of people did not know, had no idea that they were being exposed to lead. And -- but when they learned about the information, they made the connection, many of them, felt that they were personally impacted, that their families were personally impacted, you know, people made attribute this lead exposure to different health ailments. One woman in particular who I met, got her baby, newborn baby tested after learning this information and the test results were alarming, her baby had high levels of lead, the mom happens to -- her mom happens to be an attorney with means, so she moved her and her baby out of the neighborhood to a different community that's not next to an airport. And -- I mean she has means to, this particular woman has the ability, the privilege to move out, but the majority of the residents that live here in this neighborhood don't have the means to leave, we are not a privileged community. The majority of us, we are a majority of low-income community, immigrant community, and we are mostly people of color, Mexican American, Latino, Asian, Pacific Islander, so -- I really hope that the EPA will think about the harm that it's doing to the community, the harm really outweighs the benefits. It's -- I don't believe that, at least in our particular neighborhood that the airplane use, the airplanes are flying to help as much as the pilots say that they are helping. I read the official city and county documents describing the emergency response use and activity at the airport and it's very very minimal. In fact, one activity that's described in these reports is that the police department uses the microwave to warm up their lunch. That's one of the examples that was literally in an official government document. So the risks really outweigh the benefits. The majority of airplanes are actually used recreationally or by students. We have three flight schools at Reid-Hillview Airport. One of them caters to Japanese pilots and another to European pilots because it's easier to get their pilot license in the U.S. than their home countries, so they come here, fly in circles, get the pilot license and go back home, meanwhile we are stuck with the lead levels in our lungs,

in our blood that we have to live with for the rest of our lives and we are going to pass down to our children for generations.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0002

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

Our families in East San Jose already experience significant health disparities with data showing higher rates in mortality from cancer, stroke, diabetes and hypertension. And airborne lead compounds the harms already experienced by our community. For decades community advocates have urged the county to study and address the issue of lead pollution coming from Reid-Hillview. In 2018 Supervisor Cindy Chavez, the elected official who represents East San Jose sought and our elected board supported direction to county staff to study the effects of leaded AVGAS emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0181-0005

Commenter Type: Private Citizen

Commenter: Kerry McCarthy

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or avgas, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Banning avgas cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0309-0001

Commenter Type: Private Citizen

Commenter: Craig Wallentine

Organization:

Excerpt Text:

In our state, EPA Region 8 is conducting an Environmental Justice survey that includes this risk of high lead blood levels to children (principally minorities) who live near the Salt Lake City general aviation

airfield. This field is located in an area specifically designated by EPA Region 8 as one of the most unhealthy regions of the state as shown by your EPA Environmental Justice Indices (close to 100 on a scale where 100 is worst in the region) which is disproportionately populated by communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0003

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

Most airports with the highest of lead emissions are in BIPOC communities -- like in Benton Harbor, a majority Black community, only 7 miles away, where several friends of mine live, and where an airport for small planes is located.

Comment Number: EPA-HQ-OAR-2022_0389-0448-0004

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Innocent people, including children under the age of 5, live near the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have high, and clearly unsafe, levels of lead in their blood. Most of the US airports with the highest toxic lead emissions are located within communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0518-0001

Commenter Type: Private Citizen

Commenter: Theodore Weinreich

Organization:

Excerpt Text:

[FL TEXT REMOVED] p.s. Dear Secretary Michael Regan, It is no accident that [FL TEXT REMOVED] It is a vicious cycle: airports locate where there is cheap land, and neighborhoods inhabited by a population of lower income people that often include people of color, are also located where land is cheap. Children born in these neighborhoods are affected by lead poisoning which decreases mental capacity and health. These children grow to become adults with decreased cognitive abilities and earning potential, and so the cycle continues. I implore you to quickly adopt rules to eliminate "avgas" from being used in the United States, and take this vital step toward eliminating environmental discrimination in America. Sincerely, Theodore Weinreich Miami Beach, FL 33139

Comment Number: EPA-HQ-OAR-2022_0389-0593-0001

Commenter Type: Private Citizen

Commenter: Liz Campbell

Organization:

Excerpt Text:

I live in Seattle, Washington. Our airport has constant and growing air traffic. There is not a 5 mins of

time where you can't hear air traffic all day and night. It is horrifying the amount of lead being dropped on neighborhoods and of course low income neighborhoods and the effect on the children and all people living there. We need our EPA to protect our environment and we need this protection ASAP.

Comment Number: EPA-HQ-OAR-2022_0389-0595-0001

Commenter Type: Private Citizen

Commenter: Edward Simpson

Organization:

Excerpt Text:

Please finalize the endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. You know the horrors of lead exposure. Sadly children in poor communities, and often Black children, are victims of the lead poison. They have no chance once they have been exposed, usually most of their childhood. Makes us wonder if these were white, wealthy communities, would this still be an issue? Of course white wealthy communities would never allow such poisons in their neighborhoods. Before more lives are forever harmed

Comment Number: EPA-HQ-OAR-2022_0389-0643-0001

Commenter Type: Private Citizen

Commenter: Hasibe Caballero-Gomez

Organization:

Excerpt Text:

There is no safe level of lead exposure. Even small amounts of lead can cause permanent health effects, and lead is a highly persistent pollutant. That means as long as it's dispersed into our atmosphere it will remain in our soils for centuries unless the soil is remediated, which is unlikely due to high costs. Therefore, for the safety and well-being of the public, and in order to avoid the further disproportionate damage to non-white children, leaded fuel for aircraft engines should be banned.

Comment Number: EPA-HQ-OAR-2022_0389-0684-0001

Commenter Type: Professional Association

Commenter:

Organization: Pennsylvania Chapter of the American Academy of Pediatrics

Excerpt Text:

We applaud the EPA for their ongoing efforts to curb air pollution from different sources. We are in full support of the EPA's proposed action, finding that lead engine emissions contribute to air pollution and are a health hazard, as it is well known that lead has a significantly negative impact on children and disproportionately affects minority and historically marginalized communities (reference PMID: 30909658).

Comment Number: EPA-HQ-OAR-2022_0389-0699-0002

Commenter Type: Private Citizen

Commenter: Tony Romero

Organization:

Excerpt Text:

Blood lead levels in children from low-income households remain higher than those in children from higher income households. Blood-lead level increases in children living downwind from Reid Hillview were like those seen during the Flint, Michigan water crisis. We need the EPA to act now to protect our communities!

Comment Number: EPA-HQ-OAR-2022_0389-0700-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

Blood lead levels in children from low-income households remain higher than those in children from higher income households. Locally, a comprehensive study of 10 years of data confirmed that children living near Reid Hillview Airport were at elevated risk for harmful lead exposure. We need the EPA to act now to protect our communities!

Comment Number: EPA-HQ-OAR-2022_0389-0757-0002

Commenter Type: Private Citizen

Commenter: Brandon Bowersox-Johnson

Organization:

Excerpt Text:

Here in Washington State, my nearest GA (general aviation) airport, KCIA, is dangerously close to our BIPOC communities. More than half our county's BIPOC residents live within 10 miles of the airport. Our state-sponsored research showed they face 5 years shorter life expectancy than our county average! The lead pollution is one clear contributor and it has a simple replacement!! Banning avgas cannot wait any longer. Every day that leaded gasoline is used in piston-engine aircraft, communities here in my state and across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0768-0001

Commenter Type: Private Citizen

Commenter: Edward L. Simpson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Now is the time to finalize an endangerment finding for leaded aviation gasoline. We must also adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. People live near airports! Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color. The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Edward L. Simpson South Pasadena, CA 91030

Comment Number: EPA-HQ-OAR-2022-0389-0134-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Section VI (J): Environmental Justice Considerations

The Proposal carefully considered that there is need for Environmental Justice Considerations, as per Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations. It makes clear where airports with high concentrations of piston engines are, and what the percentage of people of color (considered a low socioeconomic class here) are subject to being in proximity to these airports and thus higher lead pollution emissions. Thus, the Proposal makes certain it is considering distribution analysis and how it will affect a vast number of people.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0009

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Children, people of color, and economically disadvantaged populations are known to be disproportionately impacted by this pollutant as are pregnant mothers, newborns, and unborn fetuses.

Comment Number: EPA-HQ-OAR-2022-0389-0159-0002

Commenter Type: Private Citizen

Commenter: B. J. Wilson

Organization:

Excerpt Text:

In section II of the report, the EPA notes that between 2011 and 2020, the Department of Energy estimates that an average of 184 million gallons of leaded avgas were supplied annually in the United States. In this same section, the EPA also noted that although the most commonly available type of avgas is labeled as “low lead,” this particular fuel still contains up to 2.12 grams of lead per gallon. In this section, the EPA also describes their findings that the blood lead levels in children were positively associated with proximity to airports. This seems to not only indicate that lead contamination from leaded aircraft fuel is not only a significant and measurable problem but presents a case of environmental injustice as well. The EPA indicates in the section on environmental justice, that low-income and people of color in the United States are more likely to live near airports, increasing their risk of exposure to lead contamination from aircraft emissions. This is particularly true for many Indigenous communities in rural Alaska which are often dependent on small aircraft as transport in remote areas.

Comment Number: EPA-HQ-OAR-2022-0389-0161-0001

Commenter Type: Private Citizen

Commenter: Maggie Glenn

Organization:

Excerpt Text:

The proposed rule also included the aspect of environmental justice. The addition of more lead and other pollutants into our air have been proven to endanger human health. It has been shown that populations living near airports are more impacted by the pollution than other communities. Studies show that the people living in these areas are often low income communities or people of color. It is unfair that these

communities are suffering the consequences of poor air quality more than other communities. I think finding just how this kind of air pollution affects human health can push to change ways. If the leaded fuel causes more health declines than other fuel sources, this information may create new standards, or even motivate airlines to change their current practices. It is just utterly unfair that communities near airports suffer for something they have no control over.

Comment Number: EPA-HQ-OAR-2022-0389-0176-0001

Commenter Type: Private Citizen

Commenter: Katherine Miller

Organization:

Excerpt Text:

I am submitting a comment in response to the Environmental Protection Agency’s (EPA) comment invitation found in Section 2.A.5 in the Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare [Footnote 1: In this comment, EPA Docket No. EPA-HQ-OAR-2022-0389 Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare will henceforth be referred to as the “Leaded Fuel Proposed Action” for the sake of concision.] as posted on Regulations.gov on the 16th of October 2022. [Bold: In response to the invitation, I support this proposed rule, but express my concern in Section III in the Leaded Fuel Proposed Action in that it does not mention healthy equity as a factor in the Administrator’s identification of a relevant air pollutant that potentially endangers public health or welfare.]

I obtained my bachelor’s degree in Public Health from Brigham Young University and am currently a graduate student at the University of Utah pursuing a master’s degree in Public Health with an emphasis in Public Policy. Additionally, I am a Certified Health Education Specialist (CHES) and hold great concern for the health of my community in the Salt Lake Valley. I am commenting on the Leaded Fuel Proposed Action on my own behalf in the interest of health equity and environmental justice (EJ) for low-income and marginalized individuals.

EPA’s proposal sits on the foundation of primary prevention, in that the Administrator’s judgement anticipates adverse health effects of air pollutants to reduce the impact of chronic diseases in individuals on an institutional and societal scale. [Footnote 2: Pigeot, Iris, Stefaan De Henauw, Ronja Foraita, Ingeborg Jahn, and Wolfgang Ahrens. “Primary Prevention from the Epidemiology Perspective: Three Examples from the Practice.” *BMC Medical Research Methodology* 10, no. 1 (2010). <https://doi.org/10.1186/1471-2288-10-10>.] According to the research in the Leaded Fuel Proposed Action, overall lead emissions will decrease over the years but remain high in certain locations. While EPA assumes that the Administrator can use judgement in deciding on possible air pollutants harming the public, the discussion on EJ emphasizes the importance for leadership to focus on possible air pollutants specifically harming marginalized communities, such as lead emissions. Clarifying the vocabulary in the proposed rule’s legal framework to identify harmful air pollutants to achieve health equity is important as the individual filling the role of Administrator changes over time and judgements shift. Making health equity a goal in the judgement of scientific findings will demonstrate EPA’s push to eliminate health disparities. [Footnote 3: Doherty, Julia A., Margaret Johnson, and Heather McPheron. “Advancing Health Equity through Organizational Change: Perspectives from Health Care Leaders.” *Health Care Management Review* 47, no. 3 (2021): 263–70. <https://doi.org/10.1097/hmr.0000000000000326>.]

The Leaded Fuel Proposed Action’s identification of lead emissions possibly being higher in certain locations is important in identifying where lead mitigation must start. However, the acknowledgement of additional information, such as a populations vulnerability status to high exposure levels of lead emission

and availability to healthcare, must occur in determining where interventions will begin. Adapting an integrative population health equity framework (IPHEF) into the Leaded Fuel Proposed Action’s legal framework will assist in ensuring health equity in lead mitigation. IPHEF focuses on six main approaches and models, but the Leaded Fuel Proposed Action need only focus on the social determinants aspect of the framework when identifying air pollutants. The social determinants aspect focuses on health inequities by describing the disproportionate burden of disease in some communities due to the environment they live in. [Footnote 4: Trinh-Shevrin, Chau, Nadia S. Islam, Smiti Nadkarni, Rebecca Park, and Simona C. Kwon. “Defining an Integrative Approach for Health Promotion and Disease Prevention: A Population Health Equity Framework.” *Journal of Health Care for the Poor and Underserved* 26, no. 2A (2015): 146–63. <https://doi.org/10.1353/hpu.2015.0067>.]

Population wide strategies do not always help in eliminating the health risk in marginalized communities and can even widen the health gap on a community level. Identifying pollutants in vulnerable populations and how the cause of it relates to that community is important as such communities respond better to bottom-up approaches starting at the individual level versus top- down approaches starting as a policy level. [Footnote 5: Rickenbacker, Harold, Fred Brown, and Melissa Bilec. “Creating Environmental Consciousness in Underserved Communities: Implementation and Outcomes of Community-Based Environmental Justice and Air Pollution Research.” *Sustainable Cities and Society* 47 (2019): 101473. <https://doi.org/10.1016/j.scs.2019.101473>.] Fortunately, EPA’s Equity Action Plan emphasizes the need to build underserved communities’ capacity to implement and provide community-led projects on their own. [Footnote 6: “EPA Releases Equity Action Plan Alongside Federal Partners to Advance Environmental Justice and Civil Rights.” EPA. Environmental Protection Agency, April 14, 2022. <https://www.epa.gov/newsreleases/epa-releases-equity-action-plan-alongside-federal-partners-advance-environmental>.] The Administrator’s judgement must weigh health equity as a factor in determining air pollutants in order to align with EPA’s Equity Action Plan.

Focusing the Leaded Fuel Proposed Action’s legal framework on health equity is the first step in decreasing lead exposure among low-income children and communities of color. Historically, the United States failed to assist these communities from being exposed to such toxic pollutants. [Footnote 7: Benfer, Emily A. "CONTAMINATED CHILDHOOD: HOW THE UNITED STATES FAILED TO PREVENT THE CHRONIC LEAD POISONING OF LOW-INCOME CHILDREN AND COMMUNITIES OF COLOR." *The Harvard Environmental Law Review* : HELR 41, no. 2 (2017): 493-561. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/helr41&div=15&id=&page=>] By enforcing IPHEF with the the Leaded Fuel Proposed Action, EPA will help prevent the same inequities from continuing in the future and meet the Equity Action Plan priorities.

Comment Number: EPA-HQ-OAR-2022-0389-0183-0004

Commenter Type: Private Citizen

Commenter: Sheetal Patel

Organization:

Excerpt Text:

In particular, the EPA should focus its efforts initially in lower-income areas as blood lead levels in children from low-income households are much higher than those in children from higher income households. We need to protect young children from exposure regardless of racial, ethnic, and socioeconomic disparities.

Comment Number: EPA-HQ-OAR-2022-0389-0183-0006

Commenter Type: Private Citizen

Commenter: Sheetal Patel

Organization:

Excerpt Text:

Since the 1970s, multiple scholars have chronicled the threat that environmental lead poses to humans, especially children ages 0 to 5 years. According to the Centers for Disease Control and Prevention (CDC), there is no safe level of lead exposure. The CDC currently uses a blood lead reference value of 3.5 micrograms of lead per deciliter of blood. Anyone with a blood lead level at or above the reference value would be considered to have lead poisoning.

Populations affected by lead poisoning more often include disadvantaged inner-city minority children and adults. There is clear evidence in several studies that minority children and adults living in poverty bear a disproportionate risk of exposure to lead.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0004

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

When viewing the issue from an equitability standpoint, it becomes clear that action needs to be taken on the aircraft engines operating on leaded fuels. As the EPA explains in the rule proposal, [n]umerous studies have found that environmental hazards such as air pollution are more prevalent in areas where people of color and low-income populations represent a higher fraction of the population compared with the general population, including near transportation sources. (p. 62767).

Furthermore, in some states, Black, Asian, and Indigenous populations are more likely to live near an airport, meaning that these areas would have a generally discriminatory impact on the populations [Footnote 8: Ibid. pg. 62769]. Low-income people face similar adverse outcomes with, in close proximity to 716 airports, people living at less than two-times the Federal Poverty Level represent[ing] a higher proportion of the overall population within one kilometer of airport runways compared with the proportion of people living at less than two-times the Federal Poverty Level among people living one to five kilometers away. (p. 62770).

The negative impacts that lead exposure have on people, especially minority, indigenous, and low-income populations create an equitable need to address the pollution that engines using leaded fuels create.

Comment Number: EPA-HQ-OAR-2022-0389-0196-0005

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

If the FAA refuses to enforce their vague and often contradictory rules and regulations, they could at least try to practice Environmental Justice by equally distributing the air traffic and resulting pollution.

Currently air traffic and pollution is higher in disadvantaged areas. (see attachment 3) If you guessed that Brentwood, Franklin and Spring Hill are where the wealthy people live, good guess. I would like to know who designated the area east of Interstate 24 as the flight training practice area of Middle Tennessee. This past year, this disadvantaged rural area has been inundated with leaded fuel exhaust pollution and noise pollution continually on a daily basis. What are the cumulative effects of the settled particulate on the tree leaves, the blades of grass, the water in the creeks and ponds, all of which the wildlife and livestock

consume on a daily basis? Do the calves and fawns in this area have abnormal levels of lead in their blood similar to children exposed to high levels of lead? Most people I talk to are surprised that leaded fuel is still being used by small aircraft. The EPA could do a better job of communicating. Reading the comments of others living halfway across the country, has made me realize that "We are all riding on the same bus". Or as my mother used to say when I was dragging my feet. "GET THE LEAD OUT"

Comment Number: EPA-HQ-OAR-2022-0389-0202-0002

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

With the increased understanding of the harmful health impacts of lead, it would be not be ethical to continue intentionally putting lead into our environment. It is pertinent that we consider future generations and the health of our children. No person, or animal, deserves to suffer from lead poisoning due to breathing the air. Clean air is essential to health, and air pollution disproportionately impacts our most marginalized people. Not only does the lead get into the air we breathe, but it ends up settling into the soil in which our food is grown. Lead is toxic if inhaled or ingested, which we have known and banned the use of lead in other ways.

Comment Number: EPA-HQ-OAR-2022-0389-0211-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Addressing all sources of lead is an environmental justice priority [Footnote 4: United States Environmental Protection Agency. 2022. EPA strategy to reduce lead exposures and disparities in U.S. communities. October 2022. Available at: https://www.epa.gov/system/files/documents/2022-11/Lead%20Strategy_1.pdf]. Numerous studies report persistent racial and socioeconomic disparities in lead exposure, disproportionately burdening communities of color and children from lower income homes [Footnote 5: E.g., Cassidy-Bushrow et al. 2017. Burden of higher lead exposure in African-Americans starts in utero and persists into childhood. *Environment International* 108: 221-227; Teye et al. 2021. Exploring persistent racial/ethnic disparities in lead exposure among American children aged 1-5 years: results from NHANES 1999-2016. *International Archives of Occupational and Environmental Health* 94: 723-730].

Comment Number: EPA-HQ-OAR-2022-0389-0213-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

The Proposed Finding invites comment on “potential EJ [Environmental Justice] impacts of aircraft lead emissions from aircraft engines and on the potential impacts on children in close proximity to runways where piston-engine aircraft operate.” A demographic analysis conducted in conjunction with this action determined that the percentages of children under five years of age, people of color, and people with low incomes are higher in neighborhoods within 500 meters or 1 kilometer of some airports than in

neighborhoods that are more distant from those airports. [87 Fed. Reg. 62770]. According to the CDC, children in low-income households are also more likely to be exposed to household lead due to the age and condition of the housing stock in their neighborhoods.[Footnote 5: Centers for Disease Control Childhood Lead Poisoning Prevention website, Populations at Higher Risk page, accessed December 20, 2022.] In addition, communities of color and low-income communities are disproportionately impacted by air pollution from a variety of other stationary and mobile air pollution sources and are more likely to be vulnerable to the health effects of those pollutants due to social, economic, and underlying health factors.[Footnote 6: EPA Research: Environmental Justice and Air Pollution webpage, <https://www.epa.gov/ej-research/epa-research-environmental-justice-and-air-pollution>, accessed December 20, 2022.]

Comment Number: EPA-HQ-OAR-2022-0389-0213-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

NESCAUM urges EPA to finalize the Proposed Finding in view of the clear evidence of the health impacts of lead exposures and the fact that piston-engine aircraft are the predominant source of lead air emissions in the United States. Moreover, it is essential that EPA consider disproportionate impacts of lead emissions from aircraft engines on vulnerable communities in its endangerment finding.

Comment Number: EPA-HQ-OAR-2022-0389-0215-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

San Diego County has a history of poor air quality. The American Lung Association State of the Air 2022 report on the 25 most polluted U.S. counties in terms of ozone levels, ranked San Diego eighth. (pg. 19) In a listing of the 25 most polluted cities based on daily PM levels, the San Diego-Chula Vista-Carlsbad region was 13th. (Pg. 13) This same area came in 6th in the list of 25 cities most polluted by ozone ratings.

Following the release of an April 7, 2022, University of California San Diego study showing that California’s environmental laws protect white residents from pollution over people of color, the PBS News Hour aired a story “How Air Pollution Is Disproportionately Impacting Minority Communities in San Diego.” The report focused on San Diego’s Barrio Logan community located next to the Port of San Diego. Seventy percent of the people who reside in this neighborhood are Hispanic. Forty percent live below the poverty level. Many are suffering from the adverse health impacts of pollution including high asthma rates, frequent bronchial infections, headaches and breathing problems due to proximity to major industrial polluters as well as pollution from heavy road traffic. Per PBS correspondent Amna Nawaz, this area has “higher levels of diesel pollution than almost anywhere in the state of California.”

San Diego County Lead Emissions

Though not discussed in the above referenced study, San Diego County residents are also heavily impacted by lead emissions released by piston-engine aircraft.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0008

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

We understand that this docket does not propose to change any emissions standards or set new regulations, but we see this finding as a step in the right direction toward remedying these issues. We are also aware that the cost is high in creating new aircraft fuels and reengineering aircraft engines to accommodate new fuels. However, given lead's significant impact on neurological and environmental health as evidenced in this docket by many health and environmental professionals, the real costs of the toxic effects of lead should not be ignored, and must continue to be addressed. Lead has a significant impact on the Band due to the proximity to the local airport of two schools with young children; the treaty hunting, fishing, and gathering rights that the Band holds; and due to the impact that lead deposits have on agricultural and soil health as well as associated natural resources the Band relies upon. The Band also recognizes and commends the excellent work that has led to the remarkable reductions in lead exposure over the past several decades in the United States, and hopes that success can continue, as current and future generations will be positively impacted by work done to reduce lead emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

III. Low-income communities and communities of color are disproportionately burdened by lead air pollution

In the preface to EPA's [*Italics: Strategy to Reduce Lead Exposures and Disparities in U.S. Communities,*] EPA Administrator Regan wrote:

Although naturally occurring, lead is undoubtedly one of society's most pervasive environmental toxins. Lead exposure can have devastating impacts to human health and can be especially harmful to developing children. We also know that because of existing racial and socioeconomic disparities, [*Italics: communities that have been historically marginalized and overburdened suffer the most*] [Footnote 23: EPA, *Strategy to Reduce Lead Exposures and Disparities in U.S. Communities 3* (2022), https://www.epa.gov/system/files/documents/2022-11/Lead%20Strategy_1.pdf (emphasis added).]

It is evident that airborne lead emissions from piston-engine aircraft contribute to this toxic lead exposure, and that EPA must take urgent action to address this public health crisis facing children across the country—and particularly children living in environmental justice communities.

“The risk for lead exposure is not the same for all children.” [Footnote 24: *L Federal Action Plan*, supra n.15, at 6.] Multiple studies show that Black children and children from low-income households “have a statistically significant increased risk of higher [blood lead levels]” compared to non-Hispanic white children and children from higher income households. [Footnote 25: *Id.* at 6-7 (collecting studies); see also *Strategy to Reduce Lead Exposures*, supra n.23, at 5 (citing Egan et al., *Blood Lead Levels in U.S. Children Ages 1-11 Years, 1976-2016*, 129 *Env't. Health Persps.* 037003-1 (2021)).] Their exposure to lead pollution is cumulative. Low-income communities and communities of color are more likely to live near general aviation airports. [Footnote 26: *Testimony of Cindy Chavez, Santa Clara Cnty. Supervisor, Dist. Two, Before the House Comm. On Oversight and Reform Subcomm. on Env't, Hearing on Health & Env't Dangers of Leaded Aviation Fuel* (July 28, 2022),

<https://www.congress.gov/117/meeting/house/115056/witnesses/HHRG-117-GO28-Wstate-ChavezC-20220728.pdf> (“Nationally, over 60% of the 50 highest lead emitting airports are located in communities with larger racial minority populations than the national average.”); *The Effect of Leaded Aviation Gasoline on Blood Lead in Children*, supra n.6, at 577 (“In Michigan, populations of lower socioeconomic status are more likely to reside near airports. Compared to more distant neighborhoods . . . neighborhoods within 2 km of an airport have significantly higher percentages of households receiving public assistance . . . and lower levels of educational attainment among adults”).] They are also more likely to live near stationary sources of lead pollution and/or live in older housing stock with a higher prevalence of lead-based paint hazards and old lead plumbing.[Footnote 27: See Federal Action Plan, supra n.15, at 6; Strategy to Reduce Lead Exposures, supra n.23, at 16; Toxic Air, supra n.12, at 8 (statement of Bruce P. Lanphear, MD, MPH) (“Lead is a cumulative poison. Children, especially low-income children in minority communities, are often heavily exposed to lead from paint and house dust in older, poorly maintained rental housing, soil in smelter communities, lead service lines, and aircraft emissions.”).] And they are more likely to be exposed to additional sources of environmental pollution. These communities are burdened by multiple non- environmental stressors as well, including significant disparities in access to health care and poorer health outcomes. [Footnote 28: See, e.g., ASPE, *Health Insurance Coverage and Access to Care Among Black Americans: Recent Trends and Key Challenges 2* (2022), <https://aspe.hhs.gov/sites/default/files/documents/08307d793263d5069fdd6504385e22f8/black-americans-coverages-access-ib.pdf>] A recent EPA report cites “substantial empirical evidence that elucidates how pollution, climate, and other environmental stressors, socioeconomic disadvantage, lack of environmental assets, and health vulnerability tend to be clustered spatially in patterns which are described as recurrent, persistent, and systematic in nature.” [Footnote 29: EPA, *Cumulative Impacts Research: Recommendations for EPA’s Office of Research and Development 6* (2022),https://www.epa.gov/system/files/documents/2022-09/Cumulative%20Impacts%20Research%20Final%20Report_FINAL-EPA%20600-R-22-014a.pdf.] These “structural drivers of inequity” cannot be ignored. [Footnote 30: Id.]

The communities living next to the Reid-Hillview Airport provide a stark example of these disparities. The one-and-a-half-mile area surrounding the airport is densely populated; it is home to 52,000 residents, including almost 13,000 children, and 21 schools and childcare centers. [Footnote 31: Memorandum from Jeffrey V. Smith, County Executive, and Sylvia Gallegos, Deputy County Executive, to Santa Clara County Board of Supervisors at 1 (Aug. 17, 2021), <http://sccgov.iqm2.com/Citizens/FileOpen.aspx?Type=30&ID=164579&MeetingID=13226>.] It is also a predominantly low-income area comprised of people of color. Sixty-one percent of residents identify as Hispanic or Latino and 79 percent report speaking a primary language other than English at home. [Footnote 32: Id. at 6, 10.] More than 58 percent of adults have a high school diploma or less. [Footnote 33: Testimony of Cindy Chavez, Santa Clara County Supervisor, District Two, supra n.26.] And more than one in four people living in the four zip codes surrounding the airport live below 200 percent of the federal poverty line. [Footnote 34: Id.] These residents are uniquely burdened by environmental and socioeconomic harms, including pollution; economic immobility; and higher-than-normal rates of mortality from cancer, Alzheimer’s disease, stroke, diabetes, hypertension, and other diseases. [Footnote 35: Id.; Memorandum from Jeffrey V. Smith, County Executive, supra n.31, at 6-14; see also Farida Jhabvala Romero, ‘In the Heart of the Pandemic’: COVID-19 Deaths Loom Large in East San Jose, KQED (Feb. 26, 2021), <https://www.kqed.org/news/11862305/in-the-heart-of-the-pandemic-covid-19-deaths-loom-large-in-east-san-jose>.] For more than 80 years, these residents have also lived with a “daily, unabated stream of an undeniably harmful toxic”— lead—emitted by piston-engine aircraft taking off and landing at Reid-Hillview. [Footnote 36: Testimony of Cindy Chavez, Santa Clara County Supervisor, District Two, supra n.26; *Children Near Reid- Hillview Airport Experience Lead Poisoning, New Study Reveals*, Bay City News (Aug. 5, 2021), <https://www.nbcbayarea.com/news/local/children-near-reid-hillview-airport-experience-lead-poisoning-new-study-reveals/2623245/>.]

[See original comment for figure depicting racial demographic pluralities in and around Reid-Hillview Airport, sourced from Justice Map]

EPA's new lead strategy declares a commitment "to protect all people from lead [*Italics: with an emphasis on high-risk communities.*]" EPA must adhere to that commitment and begin regulating avgas as soon as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

Therefore, it is appropriate that the US EPA finalize this proposed finding, as it is well supported by Executive Orders 12898 (59 FR 7629) and 14008 (86 FR) that require EPA to enact policy to incorporate Environmental Justice into their programs and policies, and Executive Order 13045 (62 FR 19885) that requires EPA to enact policy to protect children from environmental health risks and safety risks. Moreover, the rule is mandated under the Clean Air Act, 42 USC 7571, which says that "The Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare."

Comment Number: EPA-HQ-OAR-2022-0389-0233-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

When this rule is finalized, we ask that EPA acknowledge that the co-occurrence of these neurodevelopmental toxicants from this type of air emission source supports a finding of endangerment for lead emissions from piston-engine airplane emissions and further work may be required to address cumulative impacts in environmental justice communities.

Comment Number: EPA-HQ-OAR-2022-0389-0234-0006

Commenter Type: Professional Association

Commenter:

Organization: National Association of Clean Air Agencies (NACAA)

Excerpt Text:

EPA must also consider the disproportionate impact of lead emissions on environmental justice communities across the country. EPA discusses in the proposal the importance of considering the environmental justice implications of lead emissions from covered aircraft. Not only do "blood lead levels in children from low-income households remain higher than those in children from higher income households, and the most exposed Black children still have higher blood lead levels than the most exposed non-Hispanic White children,"[Footnote 9: Supra note 1 at 62,767.] there is "a greater prevalence

of people of color and of low- income populations within 500 meters or one kilometer of some airports compared with people living more distant.”[Footnote 10: Ibid, 62,756]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0019

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

Eliminating lead exposures from leaded avgas should be an environmental justice and children’s health priority of this Administration. The EPA defines environmental justice as the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”[Footnote 74: Id. at 62756.] Fair treatment means that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental and commercial operations or programs and policies.”[Footnote 75: Id. at 62756 n.11.] For over thirty years, executive policy has directed federal agencies including the EPA to make achieving environmental justice part of their mission to the greatest extent possible by addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on people of color and low-income communities.[Footnote 76: See Exec. Order No. 12898, Federal Action to Address Environmental Justice in Minority Populations and Low- Income Populations, 59 FR 7629 (Feb. 16, 1994).] The Biden-Harris Administration reaffirmed this commitment and made securing environmental justice for disadvantaged communities that have been historically marginalized and overburdened by pollution a policy priority.[Footnote 77: See Exec. Order No. 14008, Tackling the Climate Crisis at Home and Abroad, 86 FR 7619 (Feb. 1, 2021).] Executive policy also directs agencies to identify and address health and safety risks that disproportionately affect children.[Footnote 78: See Exec. Order No. 13045, Protection of Children from Environmental Health Risks and Safety Risks, 62 FR 19885 (Apr. 23, 1997).]

The EPA has recently affirmed that reducing exposures to lead nationwide, and in high- risk communities in particular, is key to fulfilling these policy commitments. In October 2022, the EPA released its Strategy to Reduce Lead Exposures and Disparities in U.S. Communities (“Lead Strategy”),[Footnote 79: U.S. EPA, Strategy to Reduce Lead Exposures and Disparities in U.S. Communities (Oct. 2022) [hereinafter “EPA Lead Strategy”].] building on the 2018 Federal Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts.[Footnote 80: President’s Task Force on Environmental Health Risks and Safety Risks to Children, Federal Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts (Dec. 2018).] The Lead Strategy recognizes that low-income communities and communities of color suffer the most from lead exposure and identifies the EPA’s work to reduce exposure inequities as responsive to the Biden-Harris Administration’s day-one commitment to advancing environmental justice and equity.[Footnote 81: EPA Lead Strategy, supra note 79, at 3.] The EPA specifically identified addressing lead emissions from use of leaded avgas as an important component of its Lead Strategy.[Footnote 82: Id. at 37-38.]

The proposed endangerment finding recognizes the environmental justice and children’s health dimensions of lead exposure from leaded avgas, providing evidence that children, communities of color, and low-income communities are disproportionately at risk. The EPA analyzed the demographic makeup of airport-adjacent communities within one kilometer of a general aviation airport compared to that of non-adjacent communities one to five kilometers from that airport. The EPA chose the one-kilometer area because of the likelihood of elevated lead levels from combustion of leaded avgas within this radius.[Footnote 83: Endangerment Finding, 87 Fed. Reg. at 62768.] The results are striking. Of the 2,022 airports included in the EPA’s analysis, 25% had a greater prevalence of children under five in the

airport-adjacent community compared to the non-adjacent community, 33% had a greater prevalence of people of color in the airport-adjacent community, and 38% had a greater prevalence of people with incomes below two-times the Federal Poverty Level in the airport- adjacent community.[Footnote 84: Id. at 62770.] The magnitude of racial and socioeconomic disparities between airport- adjacent and non-adjacent communities was large for many of these airports. Of the 666 airports with racial and ethnic disparities, 123 had disparities of 10-20% and 40 had disparities of 20%+, with the highest percent difference in the people of color population between airport-adjacent and nearby communities ranging up to 45%. Likewise, of the 761 airports with socioeconomic disparities, 180 had disparities of 10-20% and 51 had disparities of 20%+, with the highest percent difference in the low-income population between airport-adjacent and non-adjacent communities ranging up to 42%. [Footnote 85: Id.]

If anything, the EPA’s analysis understates the environmental justice implications of leaded avgas exposure. The airports raising the most serious public health and welfare concerns are those that are high lead-emitting and those located in densely populated areas. The racial and socioeconomic disparities in these highly exposed communities are especially pronounced. The Stanford Regulation, Evaluation, and Governance Lab analyzed the demographics of all communities living within one kilometer of 2,809 general aviation airports in the U.S. using the latest available Census data.[Footnote 86: See Ex. B, Decl. of Derek Ouyang [hereinafter “Ouyang Decl.”].] In all, at least 2.4 million people (7 out of every 1,000 Americans) live within one kilometer of these general aviation airports.[Footnote 87: Id. ¶ 17.] Communities adjacent to airports in the top quartile by lead emission and population density have 5.0 to 7.4 percentage points more residents of color than the country as a whole.[Footnote 88: Id. ¶ 28]

Disparities are particularly apparent for airports that account for an outsized proportion of total airport lead emissions and/or at-risk residents. The top 350 lead-emitting airports generate more than half of all general aviation airport lead emissions.[Footnote 89: Id. ¶ 13.] For the population living within one kilometer of these high-emitting airports, 52.9% of residents are persons of color compared to 42.2% of the national population.[Footnote 90: Id. ¶ 29.] Compared to the nation at large, the 700,000 people living within one kilometer of these highest lead-emitting airports are 1.3 times more likely to be people of color, 1.5 times more likely to be Hispanic or Latino, 1.6 times more likely to be Asian, and 2.5 times more likely to be Native Hawaiian and Pacific Islander.[Footnote 91: Id. ¶ 24.] Likewise, only 121 airports account for half of all persons living within one kilometer of an airport with general aviation activities; 52.3% of residents living within one kilometer of these high-density airports are persons of color.[Footnote 92: Id. ¶ 24 (Table 8).] For the 35 airports that are in the top 5% by lead emission and by density of adjacent communities, 67.7% of residents living within one kilometer are persons of color, making residents of these airport-adjacent populations 1.6 times more likely to be persons of color than in the rest of the country.[Footnote 93: Id.] Further, 65.7% of these highest-emitting and highest- density airports have disproportionately more residents of color in their vicinity compared to their surrounding county, and 71.4% have disproportionately more lower-income households in their vicinity compared to their surrounding county.[Footnote 94: Id. ¶ 25.]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0020

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

In addition, roughly 60% of households in communities adjacent to airports in the top quartile by lead emissions and population density are more likely than their surrounding county to have incomes below the national median.[Footnote 95: Id. ¶ 27.] These airports are generally located in counties that have a higher income than the U.S. as a whole.[Footnote 96: Id.] The effect of this disparity is that these lower-

income residents in wealthier counties living near general aviation airports are less able to escape the risks of lead exposure because their income levels make other housing options unavailable.

Airports in and around our jurisdictions reflect these disparities. Reid-Hillview Airport is again illustrative. The 35th highest lead-emitting airport in the nation, Reid-Hillview's ratio of lead emissions per person living within a one-mile radius is the third-highest ratio in the nation, and is over ten times the median.[Footnote 97: Analysis based on data from EPA's National Emissions Inventory and EJScreen] Over 52,000 people reside within 1.5 miles of Reid-Hillview Airport,[Footnote 98: County of Santa Clara, Report of the County Executive to Board of Supervisors, Report No. 107018 at 14 (approved as amended Aug. 17, 2021), http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=&MeetingID=13226&MediaPosition=&ID=107018&CssClass= [hereinafter "SCC Report No. 107018"].] including nearly 13,000 children.[Footnote 99: See RHV Lead Exposure Report, supra note 21, at 79 (Table 12, Column A cohort of potentially affected children).] There are also 21 schools and childcare centers in this radius.[Footnote 100: SCC Report No. 107108, supra note 98, at 1.] Located in the densely populated urban core of East San José, in the heart of Silicon Valley, the airport is situated in one of the most nonwhite and lowest-income locations in the region. In an American Community Survey, 93% of respondents living within 1.5 miles of the airport identified as Latino/Hispanic or Asian; in the neighborhoods immediately abutting the airport, 99.3% of residents identified as a race other than white.[Footnote 101: Id. at 9-10.] Nearly 80% speak a primary language other than English at home. In the four zip codes closest to the airport, 27% of residents live below 200% of the Federal Poverty Line compared to 16% for the remainder of the county.[Footnote 102: Id. at 11.] Residents in these zip codes experience higher rates of diseases like cancer, Alzheimer's, stroke, and diabetes than elsewhere in the county.[Footnote 103: Id. at 13] They also face a disproportionate burden of other sources of lead hazards, such as lead risk from housing.[Footnote 104: See CalEnviroScreen 4.0: Children's Lead Risk from Housing, available at <https://oehha.maps.arcgis.com/apps/instant/sidebar/index.html?appid=6c2ec624cea84b66a95412117da977a>.] As discussed above, elevated blood lead levels from leaded avgas exacerbate these burdens.[Footnote 105: See generally, RHV Lead Study Publication, supra note 61.]

The compounding nature of environmental health burdens borne by airport-adjacent communities is not unique to Reid-Hillview. As the EPA recognized, environmental hazards such as air pollution disproportionately burden communities of color and low-income communities, including those located near transportation sources. [Footnote 106: Endangerment Finding, 87 Fed. Reg. at 62767.] Airports themselves are a source of a range of air pollutants, including from aircraft exhaust, airport ground-service equipment, and other airport operations.[Footnote 107: See Masiol & Harrison, Aircraft Engine Exhaust Emissions and Other Airport-Related Contribution to Ambient Air Pollution: A Review, 95 Atmospheric Env't 409 (2014); cf. Bendtsen, A Review of Health Effects Associated with Exposure to Jet Engine Emissions in and Around Airports, 20 Env't Health 10 (2021) (concluding proximity of residential areas to airports with jet engine traffic was associated with increased risk of disease, increased hospital admission, and self-reported lung symptoms).]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0021

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

For many airport-adjacent communities, the harms from leaded avgas exposure also layer on top of an outsized share of exposures to other sources of lead. For instance, a study of 448 airports in Michigan reported that the percentage of homes presumed by their age to contain lead-based paint was almost twice as high in neighborhoods proximate to airports compared to

neighborhoods more distant from airports.[Footnote 108: Zahran et al., supra note 42, at 576.] In other words, those children most at risk of leaded avgas exposure are also among those at highest risk of lead-based paint exposure.

Many airport-adjacent communities are particularly vulnerable to impacts from these cumulative exposures due to poverty, health characteristics, housing burden, linguistic isolation, age, and other factors. A published study documented that children living near general aviation airports across the state of Michigan were disproportionately likely to live in households receiving public assistance.[Footnote 109: Lanphear Decl. ¶ 16.] In the City of Oakland, the neighborhood surrounding the Oakland International Airport suffers from a variety of environmental hazards, such as poor air or water quality, as well as socioeconomic limitations, such as lack of access to healthcare or linguistic isolation.[Footnote 110: Tobias, supra note 39, at 52-54.] Over 80% of the residents of this neighborhood are Black or Latinx.[Footnote 111: Id. at 57.] In this way, the health impacts of lead exposure from avgas compound risks from other sources of air pollution, lead hazards, and socioeconomic vulnerabilities.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0003

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

As the EPA documents in its proposed finding, airport-adjacent communities are disproportionately low-income and/or communities of color, and many are already overburdened with other sources of lead exposure. Airports operating in or nearby our jurisdictions illustrate this environmental injustice.

Comment Number: EPA-HQ-OAR-2022-0389-0240-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

Latinos United for a New America urges the EPA to finalize its finding that lead emissions from covered aircraft engines using leaded fuel endanger human health. The community surrounding Reid Hillview Airport is an environmental justice community that is also impacted by immigration status, income status, and racial backgrounds. The EPA has made it a mission to protect children's health from environmental risks, studies like the one done around Reid Hillview Airport show that blood lead levels in children from low-income households remain higher than those in children from higher income households. Communities living around general aviation airports are exposed to dangerous fumes of lead coming from small aircrafts and experience daily health hazards. LUNA and our surrounding neighborhoods urge the EPA to take action now by regulating leaded fuel and preventing further lead contamination to vulnerable communities.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

Reid-Hillview Airport in East San Jose exemplifies the public health and environmental justice implications of leaded aviation fuel.

Reid-Hillview Airport is a regional 180-acre airport in East San Jose that uses small, private, lead-fueled airplanes. It was created in 1935 and sold large amounts of leaded fuel until Santa Clara County banned the sale of leaded aviation fuel in 2018, in response to community-led demands to close the airport.[Footnote 6: <https://sanjosespotlight.com/east-san-jose-airport-switches-to-unleaded-fuel-as-demands-for-closure-escalate/>]52,000 residents live within 1.5 miles of the airport, along with 23 schools and daycares. Reid-Hillview Airport is located in a predominantly non-white community: over 60% of the local population identify as Latinx, and 79% have a primary/preferred language that is not English.[Footnote 7: Representatives Discuss the Impacts of Leaded Aviation Fuel on Communities and Children – The Eno Center for Transportation (enotrans.org)]

Comment Number: EPA-HQ-OAR-2022-0389-0243-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

RHV Airport has been exposing surrounding communities of color to lead for over 80 years. In 2021, a study commissioned by Santa Clara County found alarmingly high blood lead levels among children living near RHV, even higher than those detected at the peak of the Flint Water Crisis.[Footnote 8: <https://news.sccgov.org/news-release/study-commissioned-county-santa-clara-finds-increased-lead-levels-children-living-near>] Proximity to the airport was also associated with higher blood lead levels, with those living within a half-mile of the airport having the highest blood lead levels.[Footnote 9: Id.] A 2022 EPA report confirmed RHV Airport was the 34th highest lead-emitting airport in the U.S. out of 19,622.[Footnote 10: Do You Live Close Enough to a Small U.S. Airport To Have Lead Exposure? Check Our Maps | Pulitzer Center] Residents in the area have reported adverse lead-related health conditions ranging from asthma, respiratory problems, cancer, developmental disabilities, and more, in addition to extreme headaches, sleep disturbances, and disruptions to social/cultural life caused by persistent noise pollution. Moreover, RHV Airport has had at least 10 airplane crashes in the past decade on public and private property, leading to serious injury.[Footnote 11: Pilot seriously injured in plane crash near San Jose's Reid-Hillview Airport - ABC7 San Francisco (abc7news.com)]

Comment Number: EPA-HQ-OAR-2022-0389-0243-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

The EPA's endangerment finding is critical because of the environmental racism implications for communities such as East San Jose who are disproportionately exposed to leaded aviation fuel. East San Jose's high percentages of communities of color is the result of government and non-government redlining policies that affected the entire U.S. [Footnote 12: Redlining San Jose, 1936-1939 (joshbegley.com)] The siting of toxic waste facilities and environmental hazards often occurred hand-in-hand with redlining policies.[Footnote 13: Rivera, A., Darden, J.T., Dear, N. et al. Environmental injustice among Hispanics in Santa Clara, California: a human– environment heat vulnerability assessment. *GeoJournal* (2022). <https://doi.org/10.1007/s10708-022-10768-4>] RHV Airport, created over 30 years before the fall of Jim Crow, was specifically and intentionally placed in East San Jose due to the

high population of immigrants, Mexican, and Latinx people.[Footnote 14: Santa Clara County environmentalists cheer EPA inquiry of leaded aviation fuel - Local News Matters]

Dr. Ruth Wilson Gilmore defines racism as “the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death”. [Footnote 15: Gilmore, Ruth Wilson. Golden gulag: Prisons, surplus, crisis, and opposition in globalizing California. Vol. 21. Univ of California Press, 2007] The pollution caused by RHV Airport is a clear-cut example of the vulnerability to premature death.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

The EPA should use its authority to remedy social and environmental determinants of health, including airborne lead exposure.

To understand public health and welfare, we must begin with the social determinants of health, which are the non-medical factors that influence health outcomes.[Footnote 16: Social Determinants of Health - Healthy People 2030 | health.gov] These includes factors such as air, water, housing quality, and the presence of environmental toxins, which lead to lower life expectancy and particular hardship for historically-excluded communities. These social determinants of health are also political, in the sense that they are directly affected by government policy.[Footnote 17: Political Determinants of Health - Satcher Health Leadership Institute (satcherinstitute.org)]

In the case of RHV Airport, the government has the ability to regulate aviation fuel and close RHV Airport. Instead of exposing the community to dangerous chemicals, this 180-acre airport should be transformed into community-centered vision for families to thrive and to feel safe. The majority of San Jose residents, and especially those directly impacted by the RHV Airport, support closing Reid- Hillview Airport.[Footnote 18: San Jose students survey residents on Reid-Hillview Airport closure - San José Spotlight (sanjosespotlight.com)]

It took decades and thousands of studies before the General Surgeon confirmed that smoking was dangerous.[Footnote 19: History of the Surgeon General's Reports on Smoking and Health. Centers for Disease Control and Prevention. https://www.cdc.gov/tobacco/data_statistics/sgr/history/index.htm] That slowness was due to the power of the tobacco industry and led to an untold number of unnecessary deaths. Today, despite pushback from the aviation industry, the danger of leaded aviation fuel is clear. The well-being of children and families should not be measured against industry dollars.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0009

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

The EPA must finally acknowledge the harm to public health and welfare caused by leaded aviation fuel, especially for communities of color and historically excluded communities.

V. Conclusion

The Law Foundation strongly urges the EPA to move forward with an endangerment finding for airborne lead, including from leaded aviation fuel. As reflected by Reid-Hillview Airport in East

San Jose, exposure to leaded aviation fuel is a public health, environmental justice, and racial equity issue. Thank you for your consideration of these comments.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0022

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

These emissions disparately impact people of color, children under the age of five, and linguistically isolated populations. Based on data gathered from EPA’s 2017 National Emissions Inventory and EJScreen, nine out of Wisconsin’s top 15 lead-emitting airports are in communities at or above the 50th percentile for people of color. Five of the highest-emitting airports are located in linguistically isolated communities, and ten are in communities that are at or above the 50th percentile for population under age five.

As one example, Sheboygan County Memorial Airport in northeast Wisconsin is the third highest lead-emitting general aviation airport in the state, with 313 pounds of lead emissions based on EPA’s most recent emissions data. The surrounding community is already contending with lead emissions from various sources. It is ranked second in 2021 for the most lead emissions generated by stationary sources in the state and falls in the 77th percentile for lead paint exposure.[Footnote 47: State of Wisconsin Department of Natural Resources, Historical Air Emissions Information, <https://dnr.wisconsin.gov/topic/AirEmissions/Historical.html> (2012-2021 Lead emissions by county).][Footnote 48: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (Point Source Data); EPA, EJScreen, <https://ejscreen.epa.gov/mapper/>.]

Lawrence J. Timmerman Airport in Milwaukee, similar to Sheboygan County Memorial Airport, is in an area with high lead emission from stationary sources.[Footnote 49: State of Wisconsin Department of Natural Resources, Historical Air Emissions Information, <https://dnr.wisconsin.gov/topic/AirEmissions/Historical.html> (2012-2021 Lead emissions by county).] It is in a community with high lead paint exposure (66th percentile) and large populations of linguistically isolated (72nd percentile) and low-income people (84th percentile), people of color (93rd percentile), and children under the age of five (74th percentile).

Comment Number: EPA-HQ-OAR-2022-0389-0245-0023

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Finally, Dane County Regional Airport and Morey Field, both in Dane County, accounted for 229 and 213 pounds of lead emissions in 2017, respectively. Both airports are in areas of the county where an uncharacteristically high proportion of residents are non-white, household predominantly speak a language other than English, and/or low-income populations.[Footnote 50: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (Point Source Data); EPA, EJScreen, <https://ejscreen.epa.gov/mapper/>.]

Children living or attending school near Dane County Regional Airport are uniquely impacted by lead emissions in the area. The surrounding community is in the 86th percentile for population under the age of five.[Footnote 51: See EPA, Alaska Community Action on Toxics et al. Petition for Rulemaking Regarding Lead Emissions from Aircraft that Operate on Leaded Fuel, <https://www.epa.gov/system/files/documents/2022-01/aviation-leaded-avgas-petition-exhibits-final-2021-10-12.pdf>.] In light of the above information, lead emissions from Wisconsin’s general aviation sector present a substantial public health threat in Wisconsin, most notably the state’s children.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0025

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

According to the FAA, emissions from leaded avgas will dramatically increase in the coming years, reaching 1.5 million pounds in annual emissions by 2025.[Footnote 54: 75 Fed. Reg. 22,440, 22,456 (April 28, 2010).] These emissions will adversely affect communities with environmental justice concerns. In a survey of the nation’s top 100 lead-emitting airports, 36 general aviation airports are located within one mile of a community that meets the federal definition of an environmental justice community based on racial composition.[Footnote 55: See Earthjustice (2021), The Top 100 Lead Polluting Airports, https://earthjustice.org/sites/default/files/files/top100leadpollutingairports_2021-08-23.pdf.] Ten airports are within one mile of an environmental justice community based on its economic status and seven airports fall into both categories.[Footnote 56: Id.]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0027

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Residents of color in low-income and/or segregated communities are particularly susceptible to harmful effects from lead exposure because they are already exposed to other sources of lead pollution exposure. For instance, a recent study concluded that racial identity, specifically identification as African American or Black, is the second strongest predictor for elevated blood lead levels.[Footnote 58: Yeter D. et al. (2020), Disparity in Risk Factor Severity for Early Childhood Blood Lead among Predominantly African-American Black Children: The 1999 to 2010 US NHANES, International Journal of Environmental Research and Public Health 17(5) at 19, <https://doi.org/10.3390/ijerph17051552>.] This research discerned that African American and Black children “are exposed to more [lead] and present with the highest average blood lead levels” owing to “the greater frequency and intensity of environmental [lead] exposure for young Black children.”[Footnote 59:] EPA’s 2020 analysis of populations residing or attending school near airports shows that low-income and non-white racial and ethnic groups are overrepresented in the neighborhoods closest to lead-emitting airports.[Footnote 60: EPA (2020), National Analysis of the Populations Residing Near or attending School Near U.S. Airports at 13-15] Delaying a final endangerment determination for lead avgas beyond 2023 will prolong these alarming public health and environmental injustices.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

For far too long, millions of individuals living, working, and going to school near general aviation airports where piston-engine aircraft are flown have been exposed to toxic lead emissions, all while EPA has known that lead exposure at any level can have devastating health effects. Moreover, much of the lead emissions from leaded avgas occurs in communities of color—in which the highest-emitting general aviation airports are disproportionately located—and these emissions contribute to the higher lead exposure and blood lead levels faced by Black children. Similarly, the emissions from leaded avgas contribute to the disproportionately high exposures to lead from other sources faced by individuals living in low-wealth communities.

Low-wealth communities are at a higher risk of harm from these exposures too: Individuals with low incomes are at risk for inadequate intake of vitamins and minerals, and nearly a third of households with incomes below the federal poverty line are food insecure. Due to the way lead is absorbed in the body, people facing food insecurity and consuming inadequate amounts of certain nutrients are more susceptible to the detrimental effects of lead exposure. In the recent [*EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities*] (“Lead Strategy”), EPA recognized that “[c]hildren living in communities overburdened by pollution and other health and social stressors, often communities of color and lower socioeconomic status, are at greater risk” from the toxic effects of lead. [Footnote 3: EPA, 540R22006, *EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities* 11 (Oct. 2022), https://www.epa.gov/system/files/documents/2022-11/Lead%20Strategy_1.pdf. (“Lead Strategy”).] If EPA takes seriously its commitment to advancing environmental justice and creating a safer, more equitable environment where all individuals can reach their full potential, “regardless of the color of their skin, money in their pocket, or the community they live in,” [Footnote 4: *Id.* at 3.] it must act swiftly to finalize the Proposed Endangerment Finding.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

II. Environmental Justice and Lead Pollution

The Biden-Harris Administration and EPA have repeatedly expressed a commitment to ensure environmental justice by directing action where it is needed most: in service of communities that historically have been inequitably burdened by environmental harms and underserved. [Footnote 16: *Lead Strategy* at 11.] As EPA has acknowledged, communities of color and low-wealth communities often face disproportionately high exposures to lead. [Footnote 17: EPA, 100-R-19-003, *Implementation Status Report for EPA Actions Under the December 2018 Federal Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts* 4 (Apr. 2019), https://www.epa.gov/sites/default/files/2019-04/documents/leadimplementationbooklet_april2019.pdf (“Childhood lead exposure is especially prevalent in many communities that represent the lowest income and most diverse populations with significant cumulative environmental risk from pollution.”).] Ending the use of leaded avgas is an important step in reducing the exposures to lead faced by these communities, many of whom are simultaneously exposed to lead from multiple sources and pathways.

Indeed, these disproportionate exposures translate to disproportionate body burdens of lead: Children of color have disproportionately high blood lead levels. Black children have body burdens of lead that are

higher, on average, than their white counterparts, both in utero and after they are born. [Footnote 18: See, e.g., Robert L. Jones et al., Trends in Blood Lead Levels and Blood Lead Testing Among US Children Aged 1 to 5 Years, 1988–2004, 123 *Pediatrics* e376 (2009), <https://doi.org/10.1542/peds.2007-3608> (finding that blood lead levels were higher in non-Hispanic Black children than in Mexican American and non-Hispanic white children over the studied time periods); Andrea E. Cassidy-Bushrow, et al., Burden of Higher Lead Exposure in African-Americans Starts in Utero and Persists into Childhood, 108 *Env't Int'l* 221 (2017), <https://doi.org/10.1016/j.envint.2017.08.021>.] EPA's biomonitoring data shows that, when considering children of all incomes, Black non-Hispanic children have median blood lead levels that are higher than those of children of other races or ethnicities, and Mexican-American children have higher median blood lead levels than white non-Hispanic children. [Footnote 19: Lead in Children Ages 1 to 5 Years: Median Concentrations in Blood, by Race/Ethnicity and Family Income, 2015-2018 (Indicator B2), Subsection in Biomonitoring – Lead, EPA, <https://www.epa.gov/americaschildrenenvironment/biomonitoring-lead> (last updated June 29, 2022).] Black children below the poverty line have higher median blood lead levels than children of any other ethnic or racial group, even those who are also below the poverty line. [Footnote 20: Id.] Black children with the highest 5% of blood lead levels in their ethnic group have higher blood lead levels than the top 5% of children in any other ethnic group. [Footnote 21: Id.]

Children in low-wealth communities also have higher blood lead levels than their peers who live in more economically secure households. Children living below the poverty line have median blood lead levels that are higher than those living above the poverty line, and the top 5% of blood lead levels of children living in poverty were higher than the top 5% of children not living in poverty. [Footnote 22: Id.] Moreover, lead can have more deleterious effects on individuals who have low wealth and are facing food insecurity. Children with certain nutrient deficiencies absorb more lead than children with adequate calcium, iron, and zinc in their diets because stored lead may be mobilized in circumstances where calcium would normally be mobilized. [Footnote 23: See, e.g., K. Bruening et al., Dietary Calcium Intakes of Urban Children at Risk of Lead Poisoning, 107 *Env't Health Persps.* 431 (1999), <https://ehp.niehs.nih.gov/doi/epdf/10.1289/ehp.99107431>; Sri Sofyani Syofyan et al., The Effects of Calcium Supplementation on Blood Lead Levels and Short-term Memory of Chronically Exposed Children: A Clinical Trial Study, 8 No. B *Open Access Macedonian J. Med. Scis.* 1144 (2020), <https://oamjms.eu/index.php/mjms/article/view/3285>; Wis. Dept. of Health Servs., P- 00600, Nutrition and Childhood Lead Poisoning (Nov. 2014), <https://www.dhs.wisconsin.gov/publications/p00660-9.pdf>.]

Any additional lead exposure among groups that already face disproportionately high blood lead levels are unacceptable. Children of color and children living in low-wealth households and communities who have higher body burdens of lead face lead-related health harms that can prevent them from reaching their full potential and can perpetuate systemic poverty. Increases in blood lead levels are associated with lower educational attainment and lower lifetime earnings, [Footnote 24: Elise Gould, Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control, 117 *Env't Health Persps.* 1162, 1164 (2009), <https://ehp.niehs.nih.gov/doi/epdf/10.1289/ehp.0800408>.] and lifetime earnings lost due to childhood lead exposure are estimated to be 46–55% higher for Black children than for white or Hispanic children. [Footnote 25: Joseph Boyle, et al., Estimated IQ Points and Lifetime Earnings Lost to Early Childhood Blood Lead Levels in the United States, 778 *Sci. Total Env't Article No.* 146307 (2021), <https://doi.org/10.1016/j.scitotenv.2021.146307>.] There is also an association between higher childhood blood lead levels and violent or anti-social behaviors resulting in entry into the criminal justice system later in life. [Footnote 26: See John Paul Wright et al., Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood, 5 *PLoS Med.* Article No. e101 (2008), <https://doi.org/10.1371/journal.pmed.0050101>; Howard W. Mielke & Sammy Zahran, The Urban Rise and Fall of Air Lead (Pb) and the Latent Surge and Retreat of Societal Violence, 43 *Env't Int'l* 48, 48–55 (2012), <https://doi.org/10.1016/j.envint.2012.03.005>.]

This disparity means that the harms associated with lead emissions from piston-engine aircraft are not felt equally. Even if lead emissions from piston-engine aircraft were experienced equally among all demographics, those who have higher levels of lead in their bodies from other sources would still suffer more from the increased exposure to this cumulative toxin. But lead emissions from piston-engine aircraft do not reach everyone equally. In certain areas, the populations more likely to reside near airports are those with less education and less wealth. [Footnote 27: See, e.g., Sammy Zahran et al., The Effect of Leaded Aviation Gasoline on Blood Lead in Children, 4 J. Ass’n Env’t & Res. Economists 577 (2017), <https://doi.org/10.1086/691686> (“In Michigan, populations of lower socioeconomic status are more likely to reside near airports. Compared to more distant neighborhoods . . . neighborhoods within 2 km of an airport have significantly higher percentages of households receiving public assistance . . . and lower levels of educational attainment among adults”).] And as EPA recognizes in its Proposed Endangerment Finding, “there is a greater prevalence of people of color and of low-income populations within 500 meters or one kilometer of some airports compared with people living more distant.” [Footnote 28: 87 Fed. Reg. at 62,756.] EPA’s analysis also shows that in Alaska, where piston-engine aircraft are used extensively, the proportion of Alaska Natives that live within 500 meters of an airport is more than three times the proportion of Alaska Natives that make up the statewide population. [Footnote 29: Id. at 62,769.] In each of these circumstances, environmental justice communities are being disproportionately harmed by their proximity to airports where leaded avgas is used. And proximity of such communities is not rare. According to an analysis of 2017 National Emissions Inventory data conducted in advance of the 2021 Petition, 60% or more of the fifty highest lead-emitting general aviation airports had populations within one mile that consisted of a higher percentage of people of color than the national average. And while EPA’s 2020 report looking broadly at the populations surrounding general aviation airports—regardless of the amount of air traffic—did not find disparities in exposure to lead from avgas based on race or income, a recent analysis found evidence that neighborhoods that are situated directly downwind of general aviation airports have “relatively higher percentages of minority inhabitants, lower median incomes, and a less educated populace.” [Footnote 30: Adam Theising, What Information Makes Airborne Lead Pollution Salient to Homeowners and Who Does It Cost? Evidence from US Airports 3 (July 2021) (unpublished paper), https://adamtheising.github.io/Papers/theising_avgas_7-21.pdf (“Being most frequently downwind of airports, residents in these block groups will bear the heaviest brunt of local pollution exposure. Results from this model are striking: block groups within 1km of an airport that receive heavy wind have 9% lower median incomes and have a roughly 3% higher black population than less wind-frequent block groups in the same distance category.”).]

EPA has stated that it is committed to reducing lead in the environment and addressing the disproportionate lead exposure that communities face. Quickly finalizing an endangerment finding for leaded avgas and moving to ban this source of lead emissions is one way that EPA can honor that commitment.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

As explained above, lead pollution does not affect everyone equally. Communities of color and individuals living in low-wealth communities face higher exposures to lead and have more lead in their bodies. Multiple studies show that Black children have higher blood lead levels than children of other races, [Footnote 52: See, e.g., Robert L. Jones et al., Trends in Blood Lead Levels and Blood Lead Testing Among US Children Aged 1 to 5 Years, 1988–2004, 123 Pediatrics e376 (2009), <https://doi.org/10.1542/peds.2007-3608> (finding that blood lead levels were higher in non- Hispanic

Black children than in Mexican American and non-Hispanic white children over the studied time periods); Andrea E. Cassidy-Bushrow, et al., Burden of Higher Lead Exposure in African-Americans Starts in Utero and Persists into Childhood, 108 Env't Int'l 221 (2017), <https://doi.org/10.1016/j.envint.2017.08.021>; Lead in Children Ages 1 to 5 Years: Median Concentrations in Blood, by Race/Ethnicity and Family Income, 2015-2018 (Indicator B2), Subsection in Biomonitoring – Lead, EPA, <https://www.epa.gov/americanchildrenenvironment/biomonitoring-lead> (last updated June 29, 2022).] and EPA's own data show that Mexican-American children have higher median blood lead levels than white non-Hispanic children. [Footnote 53: Lead in Children Ages 1 to 5 Years: Median Concentrations in Blood, by Race/Ethnicity and Family Income, 2015-2018 (Indicator B2), Subsection in Biomonitoring – Lead, EPA, <https://www.epa.gov/americanchildrenenvironment/biomonitoring-lead> (last updated June 29, 2022).] EPA's data also show that children living below the poverty line have higher median blood lead levels than children living above the poverty line. [Footnote 54: Id.] As a result of these inequitable exposures, historically overburdened groups face an increased risk of harm to their health from lead pollution.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0006

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

Eliminating exposures to lead air pollution from AVGAS should be an environmental justice priority of this administration. As the EPA recognized in its proposed rulemaking, airport adjacent communities are disproportionately low income and are communities of color and many are already overburdened with other sources of lead exposure. Reid-Hillview Airport is again sadly illustrative. The 35th highest lead emitting airport in the country, Reid-Hillview is located in the densely populated heart of East San Jose. Like most general aviation airports, the surrounding community is majority minority. 90 percent of people living within one and a half miles of the airport identify as non-white. Nearly 80 percent speak a primary language other than English at home and more than one in four residents live below 200 percent of the federal poverty level.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0007

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Lead exposure is responsible for the death of nearly half a million adults annually from cardiovascular disease and it causes irreversible damage to children's development. In the U.S. about half a million children who are four to five times more vulnerable to the impacts of lead have levels in their blood high enough to qualify as lead poisoning. The impacts of lead poisoning across all paths of exposure disproportionately fall on black, Latino and low-income communities. The same holds true for lead exposure caused by aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0007

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

Studies show that black children and children from low-income households have persistently been found to have higher blood lead levels than non-Hispanic white children, and those from higher income households. Low income communities and communities of color are also more likely to live near general aviation airports. Communities living next to the Reid-Hillview Airport provide a stark example of this problem and the need for EPA to address it. The one and a half mile area surrounding the airport is densely populated. It's home to 52,000 residents including almost 13,000 children, and 21 schools and childcare centers. It's also highly segregated. 61 percent of the residents identify as Hispanic or Latino and 79 percent report speaking a primary language other than English at home. For years this community has been uniquely burdened by environmental and socioeconomic harms including pollution, chronic disease and economic immobility. It has borne the front of the lead contamination from the Reid-Hillview for far too long

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0002

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

Many general aviation airports are located in low-income communities of color. Children in these areas are constantly exposed to lead hurting their developments and minds for their entire lives. Lead poisoning disproportionately effects communities of color with black children having the highest concentration of lead in their blood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-032-0003

Commenter Type: Private Citizen

Commenter: Karen Porter

Organization:

Excerpt Text:

I strongly urge the EPA to finally declare leaded aviation fuel as an endangerment to human health. Perhaps this will serve as the wake-up call local governments need to seriously address this ongoing threat that disproportionate effects low-income communities that receive relatively little if any benefits from these airports. The declaration could also hopefully reap the reckless actions and inactions by the Federal Aviation Administration that have perpetuated this injustice for decades. In the interest of public health procrastination is no longer an option. Thank you.

Comment Number: EPA-HQ-OAR-2022_0389-0272-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I think the EPA should update its current rules for lead in domestic paint and soil, as well as regulate aviation gasoline, the main source of lead emissions into the atmosphere, in order to safeguard children

and communities from lead exposure. If the EPA truly cares about environmental justice and human health, it must immediately stop using leaded aviation fuel. Since lead is so harmful to human health, the most motor vehicles have been free of lead for the past 25 years. The EPA needs to act similarly for aviation gasoline, which is currently responsible for 70% of lead emissions into the atmosphere. Lead increases adult mortality and harms children permanently. In my opinion, it should cover all the regulations which are related to public health and require protection for public health in population.

Comment Number: EPA-HQ-OAR-2022_0389-0290-0002

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

And of course, most of the airports with the highest lead emissions are sited in communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0300-0003

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

Many studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0351-0001

Commenter Type: Private Citizen

Commenter: Mary Florence Brink

Organization:

Excerpt Text:

Dear Administrator Michael Regan, It has been a long time since it was determined that the presence of lead in our paints, the air we breathe, and other items we use daily is a hazard to our health, and in particular, to the health of America's children. Lead had been banned in paints and gasoline, in toys and some sports equipment. As begin to travel more and our airline industry picks up after a drop in action during the Covid pandemic, it is time to finally ban the use of lead in aviation fuel. This is not a new idea-it's been recommended for the past 15 years. NOW is the time to finally act and ban the practice of putting lead in fuel for airplanes. It is time to protect the health of our most vulnerable populations-our children and grandchildren, and people who live in BIPOC communities, areas where lead pollution is typically the worst, because that's where we rich white folks like to dump our waste products. PLEASE, enact a ban on lead in aviation fuel immediately.

Comment Number: EPA-HQ-OAR-2022_0389-0372-0001

Commenter Type: Private Citizen

Commenter: James Phillips-farley

Organization:

Excerpt Text:

I appreciate that your decision implicates multiple policy choices and trade offs. However, when it comes to lead - which has no known safe level, and where exposure in minimal quantities can have life-altering impacts on children, pregnant women, and other vulnerable individuals - the EPA must make the right decision, consistent with its findings in other areas for lead paint and lead drinking water lines: ban leaded aviation gasoline. Burning leaded fuel in airplanes is no different, and perhaps worse, than burning it in cars was in the 1970s and earlier. Airplanes spread their particulates as they fly, and living near an airport (like living near a highway) is often one of the only places where poor, minority people can afford to live. This is a fundamental issue of environmental justice, so please - consider the balance between small airplanes (typically owned by a few wealthy individuals, perhaps crop dusting companies, and not too many others) and everyone who must breath and ingest the lead poison that they spew, and make the decision that is fair and just: phase out lead AV fuel, and eliminate this toxin. [FL TEXT REMOVED] Sincerely, James Phillips-farley Baltimore, MD 21229

Comment Number: EPA-HQ-OAR-2022_0389-0390-0001

Commenter Type: Private Citizen

Commenter: Wendy Gordon

Organization:

Excerpt Text:

Who even knew avgas was a "thing"??? Of the thousands (millions?)of environmental issues across our world, most of which most of us don't even know about, to find that aviation fuel still has lead in it??? We did something about this in auto fuel YEARS AGO. To now find out it is raining down upon us from above and even more importantly concentrated near airports, which are traditionally near communities of color? [FL TEXT REMOVED] Sincerely, Wendy Gordon Lambertville, NJ 08530

Comment Number: EPA-HQ-OAR-2022_0389-0401-0001

Commenter Type: Private Citizen

Commenter: Ann Prentice

Organization:

Excerpt Text:

This concerns a very serious environment problem worrying me:[FL TEXT REMOVED] We MUST protect ALL those who live in this country--communities of color have historically NOT been protected from all the types of pollution we have generated! I am 82 years old and grew up in Nebraska, part of the Great Plains in the middle of the USA. We could see to the horizon 360 degrees around our town of 8,000 (in the 1940s and early 1950s. Occasionally the alfalfa mill sent a stench into the air, but "the wind came sweeping down the plains" and it didn't take long to clear the air again. I'm VERY concerned for today's children, the grandchildren and great-grands of folks my age. [FL TEXT REMOVED] Just think: YOU can be Superman, swooping in to save the world! WE NEED YOU! Sincerely, Ann M. Prentice North Augusta, SC 29841

Comment Number: EPA-HQ-OAR-2022_0389-0421-0001

Commenter Type: Private Citizen

Commenter: Felicito Guerrero

Organization:

Excerpt Text:

No amount of lead in human blood is safe. No lead should be used in gasoline, not anymore! You are the head of the Environmental Protection Agency NOT the Environmental Polluters Agency. Please take action consistent with your agency mission, protecting the environment of the USA. Most of the airports with the highest lead emissions are in communities of color, and this is another example of environmental injustice.

Comment Number: EPA-HQ-OAR-2022_0389-0463-0001

Commenter Type: Private Citizen

Commenter: Thomas Filardo

Organization:

Excerpt Text:

Dear Secretary Michael Regan, Over five decades of Family Practice and emergency medicine work, I have seen the mentally-crippling effects of lead poisoning in children and young (mostly) adults, a societal burden disproportionately afflicting the minority and poor echelons of our currently sad society, a situation for which you hold unique powers to curtail for the future of all of us. Please, please!, finalize an endangerment finding for leaded aviation gasoline to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0465-0001

Commenter Type: Private Citizen

Commenter: Edward Simpson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please do everything now to adopt rules eliminating the use of leaded aviation gasoline, or "avgas". Finalize the endangerment finding now. Children and adults suffer from lead exposure; communities of color have long been harmed while the rest of society ignores them blaming them, their families, their poverty --everything but LEAD. We are grateful we do not live near an airport, but think of the many good people - old and young - who do. The information is clear. Avgas is dangerous. Act now! No more wasted time....and lives! Thank you for caring!

Comment Number: EPA-HQ-OAR-2022_0389-0498-0001

Commenter Type: Private Citizen

Commenter: Sharon Enzi

Organization:

Excerpt Text:

I am in disbelief that the EPA has dragged its feet for years on the danger of leaded aviation gas. Really? Why would any rational person believe that leaded gas in cars is a danger to human health but leaded gas in planes is perfectly safe? Would the EPA's inaction have anything to do with the location of most airports with planes using leaded gas-I.e., in communities of color? I urge you to finalize an endangerment finding for leaded aviation gasoline, and I press you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0517-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Disparities remain along racial, ethnic, and socioeconomic lines when it comes to lead exposure in America. In particular, Alaska Natives are in close proximity to some airports where covered aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0517-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Similar exposure rates can be seen throughout the country in low income and indigenous majority populations. For these reasons, this matter should be taken seriously and those at the EPA should consider this to be at the forefront of their agenda. Many other individuals commenting through this public submission forum have noticed a dramatic increase in pollution and noise. They are worried for their children and nervous about how lead exposure will affect their health. The regulation of air fuel, which is exhausted for the benefit of a small minority, is negatively impacting public health and safety.

Comment Number: EPA-HQ-OAR-2022_0389-0521-0001

Commenter Type: Private Citizen

Commenter: Patrick McKee

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. There are children living near these airports. Just because someone can afford an airplane doesn't give them the right to poison these kids. It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure during childhood can result in devastating impacts on health, and [FL TEXT REMOVED] Leaded avgas presents a strikingly clear equity issue. [FL TEXT REMOVED] Sincerely, Patrick McKee Mercer Island, WA 98040

Comment Number: EPA-HQ-OAR-2022_0389-0602-0002

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under age of 5, live near at least one airport where piston-engine aircraft operate, according to EPA. [FL TEXT REMOVED] Most airports with highest lead emissions are in communities of color. [FL TEXT REMOVED] Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are taking in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0606-0001

Commenter Type: Private Citizen

Commenter: Richard Ramirez

Organization:

Excerpt Text:

In general I believe many of us are unaware of the leaded gas used by airline aircraft and the danger it poses. The fact that the majority of airports with the highest lead emissions are in communities of color isn't surprising. It's time our government address racism as it applies to pollution in communities of color as it is a systemic problem in America

Comment Number: EPA-HQ-OAR-2022_0389-0633-0002

Commenter Type: Private Citizen

Commenter: Karin Hemmingsen

Organization:

Excerpt Text:

We cannot continue to treat our people - particularly our children, many of whom belong to communities of color that are already subjected to discriminatory levels of pollution and environmental degradation of all kinds - in this way.

Comment Number: EPA-HQ-OAR-2022_0389-0634-0001

Commenter Type: Private Citizen

Commenter: Jessica Kuzmier

Organization:

Excerpt Text:

There are many reasons to ban avgas and convert to alternative fuels. As you know, one chief concern about avgas is the lead in its properties. This in itself causes issues with environmental justice.

Comment Number: EPA-HQ-OAR-2022_0389-0698-0001

Commenter Type: Advocacy Organization

Commenter: Annakaren Ramirez

Organization: Pacoima Beautiful

Excerpt Text:

I support the EPA's rulemaking in compliance with published requirements, to eliminate lead from aviation gasoline and supporting EPA's endangerment finding on leaded aviation gasoline. Our community has been burdened for decades by the impact of leaded aviation fuel, specifically from the whiteman airport in Pacoima. The private airplanes that operate out of Whiteman airport use leaded aviation fuel and the airport itself stores and sells leaded aviation fuel. There is no safe level of lead exposure. Even small amounts of lead can cause serious and permanent health effects, particularly in children. Studies show that millions of people live close to general aviation airports and are exposed to lead emissions from piston-engine aircraft on a daily basis. This is an environmental justice and public health crisis.

Comment Number: EPA-HQ-OAR-2022_0389-0706-0001

Commenter Type: Private Citizen

Commenter: Estefania Bautista

Organization:

Excerpt Text:

I urge the EPA to protect the most vulnerable communities and regulate leaded airplane fuel now. It is a health hazard to have airplanes fly above homes with lead raining on them. Over 5 million people live near small airports where covered aircraft engines use leaded fuel operate. In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the annual emissions of lead to air in that year. As someone who works in East San Jose (CA), these types of studies are ones that not only concern me due to being 1.5 miles away from the Reid Hillview Airport, but make me wonder what kind of future we will have if nothing is done. Locally, a comprehensive study of 10 years of data confirmed that children living near Reid Hillview Airport were at elevated risk for harmful lead exposure. They are either experiencing symptoms now or they may develop as they age. This is frightening! I urge the EPA to finalize its findings and take action to protect the most vulnerable and who have been marginalized due to their immigration status, their income level, and their racial background.

Comment Number: EPA-HQ-OAR-2022_0389-0737-0002

Commenter Type: Private Citizen

Commenter: Teodora Reyes

Organization:

Excerpt Text:

Studies show that millions of people live close to general aviation airports and are exposed to lead emissions from piston-engine aircraft on a daily basis. This is an environmental justice and public health crisis - I am from the Pacoima, in the Northeast Side of the San Fernando Valley and a neighbor to the Whiteman Airport a county owned airport in the NESFV which has proven to pose a significant threat to our community members' health, safety, and well-being.

Comment Number: EPA-HQ-OAR-2022-0389-0138-0005

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

To fulfill their claim that “protecting children’s health and reducing lead exposure are two of EPA’s top priorities,” [Footnote 9: United States Environmental Protection Agency. (2022). Regulations for Lead Emissions from Aircraft. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-lead-emissions-aircraft>] [Bold: As it is the EPA’s responsibility to protect people from known health effects, I encourage the EPA to consider funding both soil cleanup of soluble lead halides and access to developmental and neuropsychological assessments. Especially for an issue which suffers privilege-based disparities in health coverage, [Footnote 10: Kaiser Family Foundation. (2021). Health Coverage by Race and Ethnicity. Available at: <https://www.kff.org/racial-equity-and-health-policy/issue-brief/health-coverage-by-race-and-ethnicity/>] such action is necessary while remediation of exposure sources are effectively addressed.]

Comment Number: EPA-HQ-OAR-2022-0389-0151-0002

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

I am writing this note to express my feelings and that of our community, I want to express my feelings and ask all the leaders of the community and also of the county and at the state level, to support us. In my next comment, I feel very sad and disappointed by the area where we live with my family for the last 43 years because the county and Reid hillview airport have failed to notify us that planes have been flying on gasoline containing lead, and because the airport has not installed octagons of at least 4 centimeter reading that warns that they use LEAD and other fuels that can be poisonous to our people, our community, that these warning octagons have not been installed on their facility gates outside on all four sides of their aviation land, and the county from Santa Clara the warning to the community before beginning to live in these areas, since I and my entire family were unaware of this situation of planes flying With fuel containing lead and other possible poisonous fuels, I ask all leaders to do us justice, to close Reid hillview airport immediately, and while it is open, to make the Reid Hillview airport leaders sign regulations by the law, that they will not use gas containing lead and that the airport be continuously regulated by law, and if the airport fails with the regulations they are fined with high monetary fees

Comment Number: EPA-HQ-OAR-2022-0389-0151-0003

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

Note addressed with respect to the members of EPA, I ask you to please help us with the request that the Hillview airport be regulated immediately so that it is totally prohibited, that Reid Hillview airport stop using gasoline -containing lead, Please do us justice and assert the civil rights that correspond to the children and youth of our community, stop polluting our air and that our children and youth their brains can develop normally like any child, youth of the United States since lead has been discovered dangerously harmful especially in developing children affecting their brain in academic learning and damage to vital organs, so that they can grow up happily in their community, our family is very concerned since we have a child under 11 years old and on a daily basis we also worry about him and the rest of the children and young people who are thousands living near Hillview airport withing 1 ½ mile distance, airplanes constantly flying in our area with horrendous noises every day We are panicking about the danger that they fall into our homes and we are dangerously injured, since the pilots are students and not professional pilots and that factor makes them more dangerous for our community, for the pilots, flying in our community is a luxury and for us it is a necessity to live with dignity, the abuse of our children and young people is enough and the constant abuse toward our community must stop immediately , we ask for immediate justice and that the Reid Hillview airport in San Jose be closed immediately, we urgently ask you to listen to us since our children and young people deserve they be helped, because we are human just like you are.

Comment Number: EPA-HQ-OAR-2022-0389-0153-0001

Commenter Type: Private Citizen

Commenter: Kimberly Turner

Organization:

Excerpt Text:

It is long overdue for EPA to take a holistic approach to protect children and communities from lead exposure, such as by updating its outdated standards for lead in household paint and soil, and by regulating the largest source of lead emissions into the air, aviation gasoline. If EPA takes seriously its commitment to public health and environmental justice, the agency must end the use of leaded aviation gasoline now.

Comment Number: EPA-HQ-OAR-2022-0389-0158-0001

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

I am writing to comment on the Environmental Protection's Agency's (EPA) Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. I believe that this proposed rule should be passed in order to better protect the public from the air pollution produced by aircrafts. From the effect of lead pollution on children's health, to the environmental justice disparities perpetuated by this issue, lead pollution is a major contributor to environmental inequity in the United States.

I am currently an undergraduate student attending Loyola University Chicago studying environmental policy and international relations. I am invested in this issue for many reasons, especially because I live near two airports and the lead pollution emitted by aircrafts arriving or departing may be affecting my health and the health of others within my community. The issue of aircraft pollution also largely relates to my study of international relations, given that aircrafts travel amongst nations, therefore presenting a transboundary environmental issue. The Environmental Protection Agencies' ruling on lead air-pollution will do far more than protect those in the United States, it will have an effect on global pollution and international health.

Comment Number: EPA-HQ-OAR-2022-0389-0168-0003

Commenter Type: Private Citizen

Commenter: María Reyes

Organization:

Excerpt Text:

Once again, I am asking on behalf of our minority communities - put Reid Hillview Airport on your endangered list and push for an early closure. The Cassell Community does not need to continue keeping our children and families in this contaminated environment as pilots continue purchasing leaded fuel at Mineta and Palo Alto airports without any concern for our communities.

Our children are not statistics, they are human beings that deserve to have quality of life.

If your children were subjected to this ongoing contamination, what would your actions be?

Comment Number: EPA-HQ-OAR-2022-0389-0171-0001

Commenter Type: Private Citizen

Commenter: Rita Birrueta

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I have been living in this sector for more than 30 years, and we learned many years ago that there was pollution in the air, but like everything else, because we are a low-income population, immigrants, it was not widely disclosed, and everything was kept silent as to awareness and the study of lead.

Comment Number: EPA-HQ-OAR-2022-0389-0173-0002

Commenter Type: Private Citizen

Commenter: Robert Bartholomew

Organization:

Excerpt Text:

EPA transcription from handwritten comment:

11-4-22

To: Environmental Protection Agency

From: Robert Bartholomew

Re: U.S.EPA Proposed Lead Endangerment Finding.

I am a resident of Middleton Wisconsin where lead pollution from aircraft housed at the Middleton Airport have been creating a health hazard.

I live on the flight path to the airport, as do other residents, schools, health care centers and parks. Now the city has constructed low-income housing near the airport which reflects the causal attitude the city, the airport and pilots have towards the residence-based harm (Miranda study and others) which has been presented to the City Council and others associated with the airport

Comment Number: EPA-HQ-OAR-2022-0389-0185-0006

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

I support the proposed ruling that lead emissions from aircraft engines should be considered dangerous to public health and welfare. This is a crucial step in regulating lead emissions, which can eventually create an even greater decrease in U.S. lead emissions. It is also an equitable step, addressing the racial and income discrepancy in those being affected by the lead emissions. I thank the EPA for creating this ruling proposal, and I hope to see it passed.

Comment Number: EPA-HQ-OAR-2022-0389-0202-0005

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

In an effort to protect the public's health, and aim towards environmental justice, I urge you to finalize this EPA proposal for lead endangerment finding for leaded aviation gas as soon as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0212-0001

Commenter Type: Private Citizen

Commenter: Ken Engelman

Organization:

Excerpt Text:

I am writing to share my extreme concern with Avelo 737 airplanes using lead fuel now flying low over our residential homes in Branford, East Haven, and New Haven Connecticut (Connecticut shoreline communities along the protected Long Island Sound). Tweed New Haven Airport (home of Avelo) is located in a residential zoned community that includes some areas that are Environmental Justice protected and we all should be protected from billion dollar investment businesses (Goldman Sachs) trying to force this airport expansion onto us making us breathe jet fuel fumes every day in our homes, backyards, playgrounds, and on the beaches. As the CDC states, "exposure to high levels of lead may cause anemia, weakness, and kidney and brain damage. Very high lead exposure (from Avelo 737 and other airplanes) can cause death. Lead can cross the placental barrier, which means pregnant women who are exposed to lead also expose their unborn child. Lead can damage a developing baby's nervous system". Lead is being forced into our lungs because a business with more money than anyone else is pushing their business need before our health and wellness needs where we live and that is not right. Please PROTECT US and the environment from Goldman Sachs, Avports, Avelo, and all those that place a private investor needs before ours where we live, work, and play.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0011

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Finally, a willful attitude concerning exposure of populations, including children, to lead particulate emissions contamination, as displayed by the FAA and NMC, is a conscious environmental injustice, and possibly worse.

NMC management's use of leaded fuel with focused lead particulate emissions along their and the FAA's preferred touch-and-go flight path(s) places responsibility for the associated community, neighborhood and public lead exposures squarely on their shoulders and none other. As a citizen who lived for nearly three years near the airport, it is shocking to almost daily witness the ongoing patterns of lead particulate emissions and exposures, and contemplate the cumulative environmental and public health and welfare degradation associated with lead particulates in the vicinity of the Cherry Capitol Airport due to the willful actions on the part of a small number of individual administrators / managers and Trustees associated with the FAA, NMC and the Cherry Capitol Airport.

It is important to recognize that NMC touch-and-go flight school operational flight patterns result and have resulted in geospatially-focused, repetitive, fair-weather, low-wind speed, and, low-altitude dispersal of lead particulate matter into the airspace over or near two public schools. The first school, formerly known as the Oak Park School and now known as the NES Bridgeway School, has programs for autism- spectrum students. The other is Traverse Heights Elementary School. See the illustration below for nearby school locations relative to estimated preferred NMC flight school touch-and-go flight patterns. The preferred patterns are estimated, as NMC flight school and administrative representatives determined that flight path information should not be provided to a member of the impacted public.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0001
Commenter Type: Advocacy Organization
Commenter:
Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

We write on behalf of the Natural Resources Defense Council (NRDC) regarding EPA’s proposed endangerment finding for leaded aviation gasoline (avgas). NRDC strongly supports such a finding and urges EPA to finalize the finding as quickly as possible. We also write to uplift the voices of the communities living closest to general aviation airports, including the [*Italics: Close Reid-Hillview Now!*] Coalition, who are often low-income communities and communities of color and who are disproportionately burdened by lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0011
Commenter Type: Advocacy Organization
Commenter:
Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

Federal action on avgas is well past due. Every day that EPA delays in making its endangerment finding is a day that communities living next to general aviation airports— and particularly low-income communities and communities of color—suffer unnecessary lead exposure. EPA must take charge of addressing this environmental justice and public health crisis and regulate avgas once and for all.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0016
Commenter Type: Advocacy Organization
Commenter:
Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

Millions of people live in close proximity to general aviation airports, where they are poisoned by daily emissions from the only remaining lead-containing transportation fuel. And while some piston-engine aircraft serve important infrastructure, agricultural, and medical transportation needs, the majority of piston-engine aircraft flight time stems from personal and recreational use. [Footnote 50: See 87 Fed. Reg. at 62,759; Leticia Miranda & Cyrus Farivar, *Leaded gas was phased out 25 years ago. Why are these plans still using toxic fuel?* NBC News (Apr. 22, 2021), <https://www.nbcnews.com/business/business-news/leaded-gas-was-phased-out-25-years-ago-why-are-n1264970> (reporting that personal and recreational flyers make up three-quarters of the piston-engine aircraft fleet and consume half of all avgas).] In other words, EPA’s inaction on this issue to date has effectively prioritized those personal and recreational uses over the public health and welfare of communities across the country, and especially environmental justice communities. [Footnote 51: See, e.g., *Toxic Air*, supra n.12, at 2-3 (statement of Ro Khanna, Chairman of the Subcommittee, U.S. House of Representatives) (“Despite th[e] toxicity of lead, the Federal Aviation Administration and EPA have not acted with the urgency to phase lead out of aviation fuel The FAA and EPA must not repeat past injustices and should instead exhibit the leadership we need to repair mistakes and protect kids and adults from these toxic fumes.”); Miranda & Farivar, supra n.50 (“Over the last 15 years, the EPA, which is responsible for phasing out leaded gas, has made

little substantial progress.”.)] We support EPA’s steps to finally address this toxic lead crisis and implore the agency to finalize its proposed endangerment finding for avgas without delay.

Comment Number: EPA-HQ-OAR-2022-0389-0225-0001

Commenter Type: Private Citizen

Commenter: Tracy and Anthony Williams

Organization:

Excerpt Text:

Thank you for the opportunity to comment on the Proposed Finding. It has well been documented that children living within 500 miles of an airport at which planes use leaded avgas have higher blood lead levels than other children. We would also like to state that rural communities who are located away from airports are impacted by General Aviation as well. As such, this is greatly in our case. This includes a flight school performing daily flight maneuver exercises in our community for several years now. It is also important that minority communities who are impacted by General Aviation be considered as well. There is sufficient evidence to support that Lead is harmful to our health. Even small exposure of Lead from General Aviation is detrimental to the health and welfare of many communities (especially children and pregnant women). We also would like to submit supporting evidence in the attachment document below. Thank you, Tracy & Anthony Williams

Comment Number: EPA-HQ-OAR-2022-0389-0228-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

There is no safe level of lead exposure for children, and an estimated 590,000 children in America have blood lead levels above the CDC’s reference level. Lead exposure causes irreversible tissue damage during childhood development and is responsible for nearly half a million adults dying annually from cardiovascular disease. Lead exposure is also an urgent environmental and racial justice issue: Black children are more likely to be exposed to lead and suffer its harmful effects than White and Hispanic children due to decades of redlining and other racist housing policies.

Comment Number: EPA-HQ-OAR-2022-0389-0229-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: 7 Directions of Service, The Alaska Center, et al.

Excerpt Text:

As EPA recognizes in its [*Italics: Strategy to Reduce Lead Exposures and Disparities in U.S. Communities*], children of color and children living in low-wealth communities are at an especially high risk of harm from the toxic effects of lead due in part to the higher exposures they face. Black children, for example, have higher average body burdens of lead than do children of other races, and children living below the poverty level have median blood lead levels that are higher than those of children above the poverty level. Reducing sources of lead emissions is thus an environmental justice imperative. This is particularly so because most of the fifty highest lead-emitting general aviation airports have populations within one mile with a higher-than-usual percentage of people of color, adding to the disproportionate body burdens of lead for children of color.

For decades, millions of people around the country—including hundreds of thousands of children—have been exposed to a toxic pollutant, for which there is no safe level, from the nearly 170,000 aircraft that still use leaded avgas. EPA’s Proposed Endangerment Finding, while long overdue, is a step in the right direction. EPA must finalize its finding, and the Biden- Harris Administration must move quickly to finalize a ban on leaded avgas before the end of President Biden’s first term such that the largest source of airborne lead emissions in the United States is eliminated by the end of 2025.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Lead pollution is also an environmental justice issue. In San Jose, the communities most affected by toxic lead fumes are low-income communities of color who were pushed to live near the airport, including within the airport buffer zone, by racist redlining policies. This is also the case for other communities living near general aviation airports.

Previous policies have successfully eliminated lead from other transportation sources and leaded aviation gasoline is the last source of transportation-related lead pollution. Our coalition urges you to finalize the endangerment finding and enact a policy eliminating leaded aviation fuel as soon as possible. Santa Clara county took a step in the right direction by prohibiting the sale of leaded fuel at general airports; however, other communities do not have this protection. Millions of people are exposed to airborne lead pollution on a daily basis and they need protection now. A policy regulating leaded fuel will alleviate public health and environmental concerns, taking a step in the right direction of change.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0016

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The Town of Middleton is located next to Morey Airport (C29), operated by the neighboring City of Middleton. Areas around and in the immediate vicinity of Morey Airport are highly developed with residences, schools, playgrounds, and athletic fields. The report found elevated lead levels around Morey Airport attributable to local aircraft operations, with the highest concentrations of lead in downwind areas and near the part of the runway where engine runup generally occurs.[Footnote 58: Morey Airport Lead Study, supra note 12, at 2-4.] The area just east of the airport, which is subject to the heaviest airborne lead pollution due to prevailing winds, is home to multi-unit housing, including a significant amount of the City of Middleton’s affordable housing – raising environmental justice concerns.

Comment Number: EPA-HQ-OAR-2022-0389-0240-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

The community members who own homes in the Cassell neighborhood and have lived there for decades,

shared that purchasing a home in East San Jose was not their first choice. Due racist redlining policies, community members were only able to receive loans in neighborhoods like Cassell. The argument of “move if you don’t like it” is not a solution because many have expressed that finding somewhere else to live is not easy. Airborne pollution is an environmental justice issue as those most affected are people of color who were pushed to live in environmentally unsafe neighborhoods.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0005

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

We are especially concerned that the EPA has found a disproportionate number of people of color and low-income adults and children living within 500 meters of airports. The implications of the current level of usage of leaded fuel in aircraft engines is unacceptable and new standards that reduce and eventually prohibit its use are urgently needed to help protect children and other vulnerable populations.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0001

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Our comments demonstrate that: (1) avgas poses serious public health and environmental justice concerns for states; (2) EPA should act swiftly to finalize the Proposed Endangerment Finding to protect communities in close proximity to general aviation airports from lead air pollution; and (3) EPA should initiate the emission standards rulemaking for lead in piston-engine planes as quickly as possible so that affected communities can benefit from the timely implementation of regulations addressing avgas. The Proposed Endangerment Finding is an overdue and crucial first step toward fulfilling the statutory goal set forth in 42 U.S.C. § 7571 (a)(1) of controlling the emission of harmful air pollutants from aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0012

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

According to 2020 United States Census data, these six lead-emitting airports are adjacent to overburdened communities.[Footnote 39: This information was obtained using EPA’s National Emissions Inventory 2017 data for mobile aircraft emissions in New Jersey. See id.; see also New Jersey Department of Environmental Protection, EJ Mapping, Assessment and Protection Tool, <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=34e507ead25b4aa5a5051dbb85e55055>.]

For example, Teterboro Airport, which generated over 552 pounds of lead emissions in 2017, is located in a densely populated area and is surrounded by overburdened communities. Newark Airport, which is also located in a densely populated area, generated approximately 300 pounds of lead emissions in 2017. In addition to exposure to lead air emissions from piston-engine planes at general aviation airports, Newark

residents have some of the highest lead paint exposure in the country, with exposure levels exceeding the 95th percentile.[Footnote 40: EPA, EJScreen, <https://ejscreen.epa.gov/mapper/>.] Furthermore, residents who live near the airport and who are exposed to both lead air emissions from piston-engine planes and lead paint are disproportionately people of color.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0014

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Out of the 590 airports, 253 (43 percent) are lead-emitting airports that are in potential environmental justice areas, according to the New York State Department of Environmental Conservation's environmental justice screening tool.[Footnote 41: Potential Environmental Justice Areas are defined by the New York State Department of Environmental Conservation as U.S. Census block groups of 250 to 500 households each that, in the Census, had populations that met or exceeded at least one of the following statistical thresholds: 1) At least 52.42 percent of the population in an urban area reported themselves to be members of minority groups; or 2) At least 26.28 percent of the population in a rural area reported themselves to be members of minority groups; or 3) At least 22.82 percent of the population in an urban or rural area had household incomes below the federal poverty level. See <https://www.dec.ny.gov/public/911.html>.]

Roughly, 295,742 New Yorkers live within close proximity (1.5 miles) of these top 18 airports, including 10,372 children age 5 and under. At least half of the top 18 airports (9 of 18) are located in communities with at least one indicator of vulnerability, according to EJScreen, EPA's environmental justice mapping and screening tool.

[See original attachment for Table 2: Top 18 airports for lead emissions and relevant demographic information – 1.5 mile buffer.]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0018

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

The population living near half of these airports consists people of color who are under the age of five and more than 50 percent of the population is considered low-income.[Footnote 43: This information was obtained using EPA's EJScreen mapping tool together with EPA's most recent National Emissions Inventory data report for mobile aircraft emissions in Pennsylvania.] As one example, the Northeast Philadelphia Airport, which generated over 387 pounds of lead emissions in 2017, is located in a densely populated urban area that is 70 percent low-income and 78 percent non-white.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0008

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

There are 111 lead-emitting airports that are in “disadvantaged communities” pursuant to the California Environmental Protection Agency’s environmental justice screening tool, CalEnviroScreen.[Footnote 31: CalEnviroScreen is a tool created by the Office of Environmental Health Hazard Assessment that uses environmental, health, and socioeconomic information to score and rank every census tract in the state. A census tract with a high score is one that experiences a much higher pollution burden than a census tract with a low score.]

According to CalEnviroScreen, these airports are located in geographic areas where residents are already exposed to excessive levels of ozone, fine particulate matter, toxic releases, lead from housing, and other pollution sources. Eleven airports are in census tracts that are more polluted than 95 percent of the rest of the state’s census tracts, making them among the most polluted areas in the state. Table 1 below displays a subset of these airports and the degree of environmental degradation that communities near these airports are dealing with.

In addition to pollution burden, communities near these airports are also majority non-white, and experience high rates of poverty and other challenges. For example, the Porterville Municipal and Bakersfield Municipal airports rank in the 99th and 97th percentile for unemployment respectively, and more than 70 percent of children attending an elementary school a mile away from the Compton-Woodley airport are eligible for free or reduced-price lunch.

[See original attachment for Table 1: California Airports Located in Overburdened Communities]

Comment Number: EPA-HQ-OAR-2022-0389-0251-0001

Commenter Type: Private Citizen

Commenter: Maria Reyes

Organization:

Excerpt Text:

I live under the flight path of airplanes flying in and out of Reid Hillview Airport. Reid Hillview Airport is located in the middle of a residential neighborhood with approximately 186 schools and day cares in the surrounding area.

In 2021 after years of community input and insistence, Santa Clara County finally approved a lead study. This study confirmed what the Cassell Community has known for years. Yes, there is lead in our minority community. The lead is not coming from the clay pots used for cooking (which many of us don't have), the paint used to beautify our community, the spices in our foods or the toys our children play with. It is coming from the single piston airplanes flying from Reid Airport 24/7.

We have had to endure this lead injustice for over 40 years. It is a well known fact that the government banned the sale of leaded fuel for automobiles since 1996 with the passing of the Clean Air Act, but still today - reckless pilots are still flying into our community polluting our air as they can easily purchase leaded fuel at Mineta and/or Palo Alto airports.

Comment Number: EPA-HQ-OAR-2022-0389-0259-0003

Commenter Type: Private Citizen

Commenter: Viney and Nelson

Organization:

Excerpt Text:

Communities of color that live under the flight path, such as Vista, which is about 50% Hispanic, may be at greater risk. At the July 28th, 2022 Congressional Testimonial entitled "Toxic Air: How Leaded

Aviation Fuel Is Poisoning America's Children", one committee person compared the deposition of lead into those communities living under the flight path as being "cropped-dusted" by lead.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-002-0003

Commenter Type: Advocacy Organization

Commenter: Mayra Pelagio

Organization: Latinos United for a New America

Excerpt Text:

Santa Clara County has banned the sale of leaded fuel in the airports, but pilots are still able to refuel in other sites and as they have shared in multiple media outlets they do refuel with leaded fuel and do continue to operate out of the Reid-Hillview Airport. We cannot continue to wait. There are ten schools located in within these airport and our children are continuing to be exposed to airborne lead pollution every day. I heard earlier that a transition to non-leaded fuel needs to be a just transition but it is not -- but it is not just by any means to communities who continue to suffer through the environmental injustice of being exposed to airborne lead pollution. I know that we are very fortunate to have the support we have from local governments and I am deeply concerned that other communities are being exposed to airborne lead pollution from leaded aviation fuel without any regulations that can help, that can keep them -- help them especially with children who are developing. I urge you to take these comments into consideration when you are conducting your endangerment finding and think of all of the communities that continue to be effected by allowing the use of leaded aviation fuel from small aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0005

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

We respectfully ask that the EPA finalize the endangerment finding and expedite the transition from leaded aviation fuels in a manner that prioritizes the health and safety of societies most vulnerable members over the needs of recreational pilots and associated business interest to fulfill the EPA's central emission of environmental protection and to finally deliver a measure of environmental justice to long suffering communities that have historically had little agency to protect themselves from lead pollution in general.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0006

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

Overwhelmingly these claims are tools, I'm sorry, are toys for the rich that are flown at the cost of the poor.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-009-0002

Commenter Type: Private Citizen

Commenter: Amalia Ponce

Organization:

Excerpt Text:

Therefore, I insist EPA to act now to protect communities to which I belong which are marginalized due to their income levels, their skin color and our place of birth. Please discard the conclusion that the lead emissions of airplanes using leaded fuel are not dangerous. They certainly are and I have many acquaintances that live here in the surrounding area and who are not informed. That's why I am very concerned and interested in participating in this event. I will be able to convey the message to raise awareness. Several times our children behave in a certain way, and we do not know why. It is normal for us. But it could be that our children have lead transmission and we are not aware. That's why I insist for EPA, this organization that is interested and that is helping us, to continue with its work. That's all as far as I am concerned. Thank you very much.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0007

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

97 percent of the residents are people of color and about 80 percent speak a primary language other than English at home. More than a quarter of residents in the zip code surrounding the airport live at or below 200 percent of the federal poverty line.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0006

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

In the EPA's recently finalized strategy to reduce lead emission exposures, the Biden administration has prioritized a holistic approach to protecting children and communities from lead exposure and has centered environmental justice and equity in its strategy.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0008

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Regulating aviation gasoline is necessary if the Biden/Harris administration takes seriously its commitments to protect children's health and promote environmental justice.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0002

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

We also know that because of existing racial and social economic disparities, communities that have been historically marginalized and overburdened suffer the most.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0006

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

These risks are precisely why leaded fuel was phased out and ultimately banned in motor vehicles decades ago. It's time for the use of AVGAS in piston aircraft to follow suit particularly since the vast majority of piston engine aircraft flight time stems from personal and recreational use according to FAA statistics. These uses come at the expense of low income communities and communities of color.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0007

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

So regulating leaded aircraft gasoline is a major step in fulfilling the Biden/Harris administration's commitment to protecting children's health and promoting environmental justice.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0003

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

Of course, it's not only children who are at risk, as we have heard, adults who are exposed to lead can experience cardiovascular disease and other conditions as well, and lower income in black and brown communities in particular are those that are often located near airports and so they are bearing the brunt of lead poisoning in the air. The research is completely clear. Leaded fuel poses a clear danger to communities nationwide.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0004

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

As we heard, leaded aviation fuel now counts for 70 percent of the airborne lead in the U.S. so it's high time that the EPA issue the endangerment finding and then issue rulemaking to phase out leaded aviation fuel. As a nation we were able to phase out leaded gasoline for cars and we did so without impacting the ability of Americans to drive. We can certainly do the same for leaded aviation fuel. Alternatives to leaded fuel actually exist and they work and those will be scaled up and used at airports nationwide if the

EPA acts. That's why I encourage the EPA to do so and doing so would be in line with the Biden/Harris administration commitment to supporting low income and communities of color nationwide. Communities of risk shouldn't be asked to wait any longer for the risk from leaded fuel to be addressed. Thank you for your time and attention to these remarks.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0007

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

Please look at who owns and fly the aircraft. The majority of privately owned by the wealthy few. It is not fair it is not justice that less than one percent of the population who fly the planes as a hobby are allowed to poison millions of people especially children. There is no justice while these hobbyists are allowed to hurt children. This is a crisis, this is an emergency, please put people before profits, please make our kids health and future as a top priority and take immediate action to get the lead out of all airports. For more information please go to the team five Get the Lead Out page on our website. Please protect the kids of San Diego and the nation and stop the sale of leaded fuel.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0001

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

My name is James Lawson. I represent the Southern Maryland Fair Skies Coalition. I wish to thank the EPA for this hearing proposed finding that lead emission from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. The Maryland Airport is a small airport in George County, Maryland. The Maryland Airport is in a predominantly black area of George County, Maryland. The airport is located less than a mile from McDonough, Henderson Mills School and JC Park Elementary School, both of which have predominantly black student populations. The airport has approximately 22,000 airplanes taking off and landing in 2020. The airport primarily serves piston-engine airplanes, the vast majority of which are fueled by aviation gas which contain lead. Small aircraft across the United States account for about 70 percent of lead released into the atmosphere.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0007

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

EPA FAA forecasts showing that the consumption of leaded airplane fuel is expected to total 125 million gallons in 2026 and many places communities of color are most impacted.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-029-0002

Commenter Type: Advocacy Organization

Commenter: Barbara Kanter
Organization: Quiet Collier, Inc.

Excerpt Text:

The only way to stop this and is to go the federal route. When the EPA adopts this finding environmental justice will become an achievable goal. After hitting a brick wall on the environmental issue and others just as shocking

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-031-0001
Commenter Type: Private Citizen
Commenter: Kannan Thiruvengadam
Organization: Eastie Farm, Inc.

Excerpt Text:

Good afternoon thank you for the opportunity to speak. I live very close to a large international airport. My name is Kannan, I run an urban farm in East Boston and our community is an environmental justice community, it is a climate justice community, it is also for the most part food insecure which means people with the funds they have available, they cannot afford to buy healthy food. The lands is at the mercy of whoever is able to send produce to our space to our community. There is one such farm that is right next to Hanscom which does have leaded air fuel.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-031-0003
Commenter Type: Private Citizen
Commenter: Kannan Thiruvengadam
Organization: Eastie Farm, Inc.

Excerpt Text:

Like I said, this is an environmental justice and climate justice neighborhood also happens to be a food desert so when these kind of injustices come, they appear to come together and people have very little voice to fight the injustice that happens in these communities and I think we all understands how that works. We have to stop allowing that, stop being okay with that, stop being comfortable with such gross levels of injustice and it is economic and it is also environmental. I hope that we can deal with lead in ways we have dealt with in car fuels and in paints, we can deal with lead in jet fuel as well. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-032-0001
Commenter Type: Private Citizen
Commenter: Karen Porter
Organization:

Excerpt Text:

I echo the comments by other speakers about how lead emissions present serious environmental and social justice concerns. I would like to add some specifics about the general aviation airport I am most familiar with, the Palo Alto Airport located in Silicon Valley. Its website boasts that it is the busiest single runway airport in California with thousands of operations annually. This traffic consists primarily of single engine piston aircraft. The airport sits next to protected marshlands in the San Francisco Bay so it likely presents significant albeit unquantified harm to this ecosystem.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-032-0002

Commenter Type: Private Citizen

Commenter: Karen Porter

Organization:

Excerpt Text:

But of even greater concern, the airport is bounded directly to the north by the neighboring city of East Palo Alto. Planes taking off fly directly over East Palo Alto neighborhoods, so those neighborhoods bare the brunt of takeoff emissions. There is a notable disparity between the median household income of Palo Alto and East Palo Alto. In 2021 the median household income for Palo Alto was reported to be \$196,000, while at East Palo Alto with less than half that at \$84,000. The Palo Alto Airport among other airports was party to a legal settlement with the City -- the Center for Environmental Health in 2014, this settlement called for a reduction in lead poisoning risk yet leaded AVGAS is still sold at the Palo Alto Airport. This airport was listed as number 19 on the Earthjustice 2021 list of the top 100 lead producing general aviation airports in the United States. Only in recent months have steps reportedly been taken to "promote the sale of unleaded AVGAS at Palo Alto Airport," but the sale of leaded fuel is not prohibited as has been done at Reid-Hillview and San Martin Airports located to the south which I applaud.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-033-0002

Commenter Type: Private Citizen

Commenter: Elizabeth Agramont-Justiano

Organization:

Excerpt Text:

And for decades the community has been demanding Santa Clara County to ban, to close Reid-Hillview, because we have a situation of even though leaded fuel is banned, it's still being used and folks are still being exposed to toxicity and to lead poisoning. And I door knocked in a one point five-mile radius of Reid-Hillview Airport and the majority of that folks in that area did not know about the dangerous of lead exposure via single piston-engine planes. And so as many of the folks kind of mentioned before, this area close to Reid-Hillview, 97 percent are communities of color, 60 percent represent the Latinx ethnic group and around three percent are Asian and many of the people in the area are immigrants and so I am calling on the EPA to take action because local government tend to focus on residents who have the ability to vote and they look at it in a sense of like okay, power, who is going to get me in office, and so often times communities of color especially immigrant communities are sidelined and not taken as seriously and this is what we -- we have seen happening in Santa Clara County and only because the community coming together pushing and demanding have we seen some progress but we are not there yet and it's not good enough to still have lead exposure and still have people and families and pregnant women who are being exposed to this lead on a daily basis.

Comment Number: EPA-HQ-OAR-2022_0389-0306-0001

Commenter Type: Private Citizen

Commenter: Mary Ann Hart

Organization:

Excerpt Text:

Dear Administrator Michael Regan, I am writing to speak out for my support of the banning of what is known as avgas. The lead that is released in the air around airports affects the health and development of the people who live near them. These are generally lower-income communities, and I believe they deserve the same respect in public health as those who can afford to live in places without these

environmental stressors. I would like you to ban leaded gas in small airplanes and eliminate this single largest source of lead emissions in our country.

Comment Number: EPA-HQ-OAR-2022_0389-0394-0001

Commenter Type: Private Citizen

Commenter: Brandon Restler

Organization:

Excerpt Text:

As has been found in the EPA's extensive research, lead air pollution from aircraft likely poses significant harms to communities. I wholeheartedly agree with the EPA's proposed rule to define lead as an air pollutant requiring aircraft regulation under section 231 (a)(2)(A) of the Clean Air Act.

Additionally, Executive Order 12898 directs federal agencies like the EPA to make achieving environmental justice part of their mission. Considering that communities located in close proximity to airports may be more likely to be people of color and/or low-income communities, this rule change would protect these communities from unjust lead pollution.

Response to Comments Regarding Environmental Justice

Many commenters submitted comments expressing concerns regarding environmental justice issues. The EPA acknowledges these comments and further notes, for purposes of public information and context, that, consistent with statements by many commenters, the Agency is committed to taking decisive action to advance environmental justice and civil rights as part of its FY2022-2026 Strategic Plan. In 2022, the EPA also finalized its Strategy to Reduce Lead Exposures and Disparities in U.S. Communities, which articulates the EPA's plans to reduce lead exposure in communities overburdened by pollution and eliminate inequities in elevated blood lead levels across population groups and life stages.

In this action, as discussed in greater detail in the final notice for this action as well as elsewhere in this RTC document, the EPA Administrator finds under section 231(a)(2)(A) of the Clean Air Act, that emissions of lead from engines in covered aircraft may cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare.

Many commenters express concern that communities in close proximity to general aviation airports are often low-income communities and communities of color who are disproportionately burdened by lead exposure, including Native American and indigenous Alaskan communities. Commenters often describe the characteristics and conditions of their own local communities, such as pre-existing health disparities. For example, some comments stated that non-Hispanic black children continue to be disproportionately threatened with elevated blood lead levels. We acknowledge and appreciate these comments from private citizens and local governments sharing their views and experiences. To the extent these comments offer their views without explaining what, if any, aspect of the proposal should be finalized differently, the EPA considers the comments to not be adverse to this action, and thus they do not require a response.

Some of these commenters also request that the EPA consider disproportionate impacts and environmental justice concerns in its endangerment finding. The EPA responds that while these considerations are not part of the basis for the final action, as described in Section II.A.5 of the final notice for this action, the Agency evaluated environmental justice consistent with the EPA 2016 Technical Guidance. Discussion related to Executive Order 12898 is provided in Section IV.J of the final notice. As described in that section of the final notice, the EPA believes that the human health or environmental conditions that exist prior to this action result in or have the potential to result in

disproportionate and adverse human health or environmental effects on people of color, low-income populations and/or indigenous peoples. As EPA further described in that section, it believes this action will not change existing disproportionate and adverse effects on people of color, low-income populations and/or indigenous peoples, noting that in this action, the EPA is issuing a finding, under section 231(a)(2)(A) of the Clean Air Act, that emissions of lead from engines in covered aircraft may cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, but is not proposing emission standards at this time. Further, because we are not proposing emissions standards at this time, the evaluation of environmental justice in the proposal and final action focused on describing populations living near airports in the United States.

The final decisions in this action are based on EPA's consideration under CAA section 231(a)(2)(A) of potential risks to public health and welfare from the lead air pollution, as well as its evaluation of whether emissions of lead from engines in covered aircraft contribute to that air pollution. See Section III of the final notice for further discussion of the statutory authority for this action and Sections IV and V of the final notice for further discussion of the basis for these findings. To the extent that these comments suggest that the EPA consider additional information as part of the final findings to offer further support for the final action, the EPA declines, as such consideration is not necessary to support the findings. The extensive and well-documented information, summarized in Sections IV and V of the final notice, provide sufficient grounds to support the final findings.

Another commenter states support for the proposed action but expresses concern that the EPA does not mention health equity as a factor in the Administrator's identification of a relevant air pollutant that potentially endangers public health or welfare. This commenter asserts that the Agency should weigh health equity as a factor in determining air pollutants, to align with the EPA's Equity Action Plan and demonstrate its push to eliminate health disparities. The commenter also suggests that the Agency incorporate an integrative population health equity framework into the proposed action's legal framework to assist in ensuring health equity in lead mitigation. The EPA responds that as with the previous comments, to the extent that this commenter suggests that the EPA consider additional information as part of the final findings to offer further support for the final action, the EPA declines, as such consideration is not necessary to support the findings. The information summarized in Sections IV and V of the final notice provide sufficient grounds to support the final findings. Additionally, as described more fully in Section III of the final notice for this action, the EPA's approach for this action is to follow the same approach that it has used for prior endangerment and cause or contribute findings under section 202(a) and section 231(a)(2)(A) of the CAA, which focuses on evaluation of certain scientific and technical issues. This comment does not provide any information that undermines the scientific and technical bases for these findings, as described in Sections IV and V of the final notice for this action, nor does the comment suggest that adopting the approach the commenter advocates would have led the Administrator to a different result on either the endangerment finding or the cause or contribute finding. Further, to the extent that the commenter suggests that the EPA should adopt their suggested approach for policy reasons related to potential future actions, such as informing future actions related to mitigation of lead, the comment is outside the scope of this action. As discussed in greater detail elsewhere in this RTC document (Sections 8.2.3 and 8.3), considerations related to measures that could be taken to mitigate lead are beyond the scope of this action and require no further response, as the Agency neither proposed, requested comment on, nor is finalizing any measures or requirements to mitigate human exposure to lead in this action.

Other commenters make statements regarding the importance of the cumulative impacts of multiple sources of lead, particularly among EJ communities. Some of these comments expressed concerns regarding such cumulative impacts on historically overburdened communities with EJ concerns. The EPA acknowledges these comments. The EPA further responds that to the extent that these comments suggest that the EPA consider such cumulative impacts as part of the final findings, to offer further support for the final action, the EPA declines, as such consideration is not necessary to support the findings. As noted

previously, the extensive and well-documented information, summarized in Sections IV and V of the final notice, provide sufficient grounds to support the final findings. To the extent these commenters suggest consideration of these impacts as part of establishing aircraft engine emission standards or taking some other action to mitigate lead, these comments are beyond the scope of this action. As mentioned earlier in this response, in this action, the EPA neither proposed, requested comment on, nor is finalizing any aircraft engine lead emission standards, nor any measures or requirements to mitigate lead exposure. The EPA further notes that it also addresses a request that it consider the cumulative impact of lead from numerous sources in Section 5.1 of this RTC document.

Many commenters urge the EPA and/or the FAA to take various actions to mitigate the effects of airborne lead exposures in communities with environmental justice concerns. Some of these commenters ask the EPA and FAA ban the use of leaded aviation fuel. Other commenters suggest that the EPA prioritize its mitigation activities by taking action to reduce lead emissions in communities with environmental justice concerns. Some comments request that EPA take action at specific airports, including requests to close particular airports. The EPA responds that these comments are beyond the scope of this action, as the Agency neither proposed, requested comment on, nor is finalizing any measures or requirements to mitigate exposures to airborne lead in this action. Similarly, the EPA neither proposed, requested comment on, nor is finalizing aircraft engine lead emission standards, nor any ban or restriction on the use of leaded aviation fuel. We note that the EPA further addresses comments requesting a ban of lead from aviation gasoline in Section 7.3 of this RTC document.

Other commenters express concerns about noise, increased aircraft activity, and the occurrence and ongoing threat of aircraft crashes in their communities. Commenters also suggest that some of these airports should modify or cease their operations or should take action to better communicate the health risks associated with leaded aviation fuel. Commenters also suggest that the EPA should conduct air monitoring in the communities that surround airports that service piston-engine aircraft and use this information in future enforcement and oversight efforts. At least one commenter encourages EPA to consider funding both soil cleanup of soluble lead halides and access to developmental and neuropsychological assessments. The EPA responds that comments related to aircraft noise, air traffic routes, aircraft crashes, airport closure and related topics, communication by individual airports, and funding for developmental and neuropsychological assessments are beyond the scope of this action, as the EPA neither proposed, requested comment on, nor is finalizing any action related to these topics. See section 8.2.1 for additional responses to comments about monitoring.

One commenter raises concerns related to jet fuel and proximity to an international airport, suggesting addressing lead in jet fuel as well. The EPA responds that, as discussed in Section II.A.1 of the final notice for this action, the description of covered aircraft includes aircraft that operate on leaded avgas, and those are predominately piston-engine powered aircraft. Turbine-engine powered aircraft, such as commercial jets, operate on fuel that does not contain a lead additive and so would not be included in the description of covered aircraft.

Some commenters submit additional analyses or studies as part of their comments. One commenter provides an additional evaluation of populations living near airports, stating that the results indicate that disparity by race and income is larger and occurs more frequently at airports that have the highest lead emissions and the highest residential population density compared with airports where less lead is emitted, and population density is lower. Another commenter submits a screening level assessment that found elevated lead levels around a local airport attributable to local aircraft operations, with the highest concentrations of lead in downwind areas and near the part of the runway where engine runup generally occurs [Morey Airport Lead Study]. The commenter states that this raises environmental justice concerns, noting that the area just east of the airport, which is subject to the heaviest airborne lead pollution due to prevailing winds, is home to multi-unit housing, including a significant amount of the city's affordable housing. In response, the EPA acknowledges this information, though for the reasons discussed previously in this response, the Agency is not considering this information as part of the basis for

finalizing these findings. The EPA also addresses this study in responding to comments in Section 6.1.1 of this RTC document.

Another commenter references environmental justice survey work that the EPA is conducting in Salt Lake City. In response, the EPA clarifies that the survey is related to the EPA Region 8 Ports Initiative and environmental justice activities focused on the Salt Lake City Inland Port and surrounding communities. The survey is not specific to either blood lead levels or to piston-engine aircraft emissions impacts on community health. For these reasons, and reasons discussed previously in this response, the Agency is not considering information from this survey as part of the basis for finalizing these findings. The survey may, however, include a future review of blood lead level data for near-airport communities if such datasets are available.

In this section of the RTC, the EPA is focusing on comments related to environmental justice. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, we respond to comments related to EPA's finding that lead air pollution is reasonably anticipated to endanger public health and welfare in Section 5 of this RTC document. We respond to comments related to EPA's cause or contribute finding in Section 6 of this document. We respond to comments regarding EPA's legal authority in Section 7 of this document. Section 8 also responds to many miscellaneous topics that may be related to comments unaddressed in this section.

Section 4. Comments Regarding Children and Lead Emissions from Aircraft

Comment Number: EPA-HQ-OAR-2022-0389-0177-0001

Commenter Type: Private Citizen

Commenter: Sandra Ramirez

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I live in the North Hillview neighborhood. My two children study in this neighborhood. I heard the lead study that they carried out at this place near Reid-Hillview Airport, and I have a lot of concern, because my youngest son attends J. Donald Meyers Elementary School, and I feel that my family and my community are being affected, because these planes have to be filled up with leaded gasoline to provide their services, despite this harming everyone's health. It also damages our hearing, and the concern is that they have fallen in this sector near the school where many children go to attend their primary school classes. That is why I am raising my voice, asking you to intervene so that you do not continue to deteriorate the health of all of us. It is our right.

Comment Number: EPA-HQ-OAR-2022-0389-0214-0004

Commenter Type: State Government

Commenter:

Organization: State of California, Department of Public Health (CDPH)

Excerpt Text:

The California Department of Public Health (CDPH) supports EPA making an endangerment finding on the basis that leaded aviation gas (AvGas) is a major source of lead air emissions and such emissions can be a significant source of childhood lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0009

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

In the decades that this endangerment finding has been pending, millions of children nationwide have suffered irreversibly harm from unregulated AVGAS. We ask that the EPA finalize its proposed finding and then quickly fulfill its mandate by eliminating this pollutant. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-0135-0001

Commenter Type: Private Citizen

Commenter: Lee Ann Shandle

Organization:

Excerpt Text:

It has come to my attention that Palomar Airport, located in Carlsbad, CA, is among the 50 most lead-polluting airports in the nation. In spite of this fact, Palomar Airport only provides leaded aviation fuel for its piston-engine planes. The Airport does not offer unleaded aviation fuel that is now available for piston-engine planes. Pilots can't even buy unleaded avgas for their piston planes if they wanted to because it's NOT OFFERED at the airport.

We live in the flight path & my small children also go to school near the airport & in the flight path. Please consider banning all leaded aviation fuels for the health and safety of our community. Even if the risk of lead poisoning is low, why would we take a chance with community health if there are safe, available alternatives?

Comment Number: EPA-HQ-OAR-2022_0389-0678-0001

Commenter Type: Private Citizen

Commenter: Peter Ewert

Organization:

Excerpt Text:

I am writing to bring to your attention the serious health hazards that lead exposure poses to children. Lead is a toxic metal that can be found in a variety of sources, including drinking water, paint, and gasoline. However, one particularly concerning source of lead exposure is airports that generate lead through the use of leaded aviation fuel. Exposure to lead can have a wide range of negative effects on children's health, including damage to the brain and nervous system, which can lead to learning and behavior problems. Children with high lead levels may also experience developmental delays, lower IQ scores, emotional issues and difficulty paying attention. I am writing to you with a personal concern as my family and children have likely been affected by lead exposure from our nearby airport for many years. This is not only a public health issue but also a personal one for me and many families in our neighborhood.

Comment Number: EPA-HQ-OAR-2022-0389-0249-0001

Commenter Type: State Elected Official

Commenter: Adrian Madaro

Organization: Commonwealth of Massachusetts House of Representative

Excerpt Text:

Considering our proximity in East Boston to the airport, lead emissions have been absorbed by our environment for decades, affecting the health of our residents. Lead is immensely harmful to the health of children and can cause damage to the brain, and nervous system, and slow growth and development, leading to learning and behavioral challenges. In East Boston, we have aircraft flying above playgrounds and schools and it is imperative that the transition to lead-free aviation fuel happen as quickly as possible to protect our vulnerable population. It is commonly known that no level of lead exposure is safe; therefore, while a transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure. I strongly support the decision to ban leaded fuel from aircraft engines due to the consequences communities like East Boston continue to suffer. I believe this is critical to the protection and advancement of public health and environmental stewardship.

Comment Number: EPA-HQ-OAR-2022_0389-0424-0001

Commenter Type: Private Citizen

Commenter: Agustin Jaimes Moreno

Organization:

Excerpt Text:

Leaded fuel is a problem because more than 360,000 children under the age of 5 live near one of these airports.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-006-0005

Commenter Type: Private Citizen

Commenter: Richard Offerman

Organization:

Excerpt Text:

Sadly, Santa Clara County AVGAS study found lead levels near the higher, near the airport to be higher than Flint, Michigan's lead contaminated water crisis. I have read by contrast that drinking water contamination, the release of AVGAS lead into the lived environment, our air, is a continuous daily unabated stream of undeniably harmful toxic lead dust. Many of the aircraft are recreational aircraft carelessly deliver a lead dusting to our homes and our community with every takeoff or landing. They endanger our community with their leaded gas. Listening today to Mr. Olislager and Mr. Coon, both associated with the airline industry, appear to think that the economic advantages of general aviation should outweigh the health of thousands of people living adjacent to these airports. Hearing that the industry hope to have their efforts completed by 2030 is totally unacceptable. How many years has this issue already dragged on harming families every single day. The unhealthy effects of lead on these children will follow them for their whole lives.

Again, no lead is good for children. We need to ask that our EPA work quickly to final -- on this finalization. My community also needs a thorough lead aircraft fuel health study completed here in Contra Costa County just like Santa Clara County created regarding Reid-Hillview. As of today, our children's health is knowingly being held at risk and due to the delay in addressing this health crisis, please act now, finalize an endangerment finding.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-010-0001

Commenter Type: Private Citizen

Commenter: Veronica Licon

Organization: Cassell Community

Excerpt Text:

My name is Veronica Licon and I live directly across from Reid-Hillview Airport. The planes go over my house all day as early as six in the morning and continue to go after ten o'clock at night which makes it very difficult for me to sleep, difficult for my children to sleep, and also the noise is extremely loud when it flies over, when the plane flies over my house, shaking my house. I can't even have any kind of like service, you know, like to protect my home, like for example ADT service that comes and sets alarms everywhere in my home, well, I can't have it because the planes will trigger the alarms and the -- when I did have that service and the police were coming out to these false alarms and the police told me that if I get another false alarm again, they are going to fine me. So I had to get rid of that ADT service, and being a single mom, you know, I wanted to have it to protect my children so not only can I -- I can't protect my children from the airplanes but I can't really protect them in my home because I cannot have an alarm service. When my baby was little, she's 11 now, she was terrified of the airplanes and she would run and hide from the loud noise and I am grateful that her ear drums weren't damaged but it's quite possible when we go outside to Hillview Park which is directly across from Reid-Hillview Airport, so you have the airport and the you have the park, and the planes fly over the park and it's extremely loud. And maybe my children aren't having any problem with their ear drums now but it's quite possible that it could affect them, you know, even five years from now, possibly ten years from now with these airplanes flying over so loud over our house and over the park and when I take my kids to the park, that's all that they hear all day is this loud airplane that flies over, that's all that we hear. And it -- sometimes it's just like we can't even enjoy our day at the park because of those planes and the loud noise that it brings. And my kids can't even fly kites at the park because of the airplanes. So basically, this park, this Hillview Park was designed for the airport, it was not designed for the community, it was not designed for the children because of these rules that they have of no kite flying and no trees, and this big empty grass area in the middle where the airplane to crash, which is what these planes do in this neighborhood, they just -- they crash and they crash near my kids' school at Meyer, they crash down the street to the left on Verona which is just the next street down from my house. I mean that's all that these planes do. They are not doing anything that's benefitting the community, they are just poisoning us every day, poisoning the children, poisoning the elderly, making it difficult for us to have trees here or any kind of beautiful lush life here for our children like beautiful green grass, beautiful trees, we can't have it because the lead is contaminating not only us but also our trees, our grass, anything that we want to have beautiful here in this community, we cannot have because of the lead. And these airplanes flying over are just a constant -- constant nuisance for us having to hear that extremely loud noise all day like I said, it's as early as six a.m. and all the way until ten p.m. What they do, I don't know. They are just flying over because they feel like they can. And I don't know how they can have that feeling knowing that any moment they can crash into a home and kill children, any moment they can crash into a school and kill children, any moment they can crash right here in Hillview Park and kill children. How these pilots can do that, have no shame and they should be embarrassed and ashamed of themselves flying over children, communities, homes and schools. And I am tired of it. I am tired of this loud noise and I am tired of these airplanes feeling like they can do whatever they want flying over my house, everyday all day. And I want it to end and I want it to stop.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0006

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

EPA has estimated that across the nation there are 16 million people, three million of whom are children, living within one kilometer of an airport. The county is the owner and operator of two airports, one of which Reid-Hillview Airport is directly adjacent to densely populated neighborhoods near San Jose. In a one point five-mile radius of Reid-Hillview, there are 52,000 people, 13,000 of whom are children, living in nearby neighborhoods and there are 21 local schools and childcare centers.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-012-0001

Commenter Type: Academia

Commenter: Bruce Lanphear

Organization: Simon Fraser University, on behalf of the County of Santa Clara

Excerpt Text:

I am a physician and a scientist and over the past 25 years have studied how children are poisoned by lead in paint, air, house dust and water. I have also studied how lead damages children and adults. I have been fortunate to be involved in dozens of studies around the world and I was the consultant on the Reid-Hillview Airport study. Lead is a poison. We have known that for over two centuries. Most of my research over the past 25 years was to find out how much lead is too much. All 12 studies that examined the shape of the dose response relationship per lead including one that measured lead and bone found steeper detriments in IQ scores or academic abilities at the lowest level of lead in children's blood. We don't expect this to a degree of consistency in science but we would be foolish to ignore it. The population impacts of lead exposure on brain development including IQ deficits, diminished academic abilities and elevations in ADHD are lifelong. Even when IQ deficits are subtle for an individual child, they aren't trivial and the population impact is substantial. Aaron Rubin and his team found that children with higher blood lead concentrations were less likely to obtain the same social standing as their parents. Sheryl Magzamen found in a study in Milwaukee school children that lead exposure especially impacted children who already struggled with reading abilities. But lead doesn't only impact children, it's an established risk factor for preeclampsia and preterm birth, hypertension and coronary heart disease deaths. 15 studies conducted in Europe and the United States all found that lead was a risk factor for cardiovascular disease mortality. Using the NHANES follow-up study, we found that lead was the leading risk factor for coronary heart disease deaths in the United States accounting for 185 deaths every year. Airborne lead is an important source of lead exposure in the United States. A study by EPA scientists found that children's blood lead concentrations rose sharply at airborne lead concentrations below .15 microgram per cubic meter, the current air standard, and then decelerated at higher concentrations.

Comment Number: EPA-HQ-OAR-2022-0389-0181-0005

Commenter Type: Private Citizen

Commenter: Kerry McCarthy

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or avgas, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that

children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Banning avgas cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0299-0002

Commenter Type: Private Citizen

Commenter: Barbara Fant

Organization:

Excerpt Text:

Lead exposure is responsible for serious health impacts on both children and adults. According to the EPA, more than 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have higher levels of lead in their blood

Comment Number: EPA-HQ-OAR-2022_0389-0290-0003

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

Literally every day that leaded gasoline is used in piston-engine aircraft, children are breathing in airborne lead. Leaded gasoline was banned in most cars 25 years ago! Why is avgas still being used today in nearly 170,000 piston-engine aircraft at 20,000 airports?

Comment Number: EPA-HQ-OAR-2022_0389-0300-0003

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

Many studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0002

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

Multiple studies have shown that children who live near airports have higher levels of lead in their blood, it happens when they inhale the pollutants contaminating the air. Most of the airports with the highest lead emissions are in communities of color, systemic racism at work.

Comment Number: EPA-HQ-OAR-2022_0389-0365-0001

Commenter Type: Private Citizen

Commenter: L.W. Brown

Organization:

Excerpt Text:

I am urge you to finalize the endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", now the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating childhood impacts and serious illness in adults. [FL TEXT REMOVED] Children living near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Every day that leaded gasoline is used in aircraft, lead poisons people. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today at over 20,000 airports. The need is immediate. Please finalize this finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, L.W. Brown
Bellingham, WA 98229

Comment Number: EPA-HQ-OAR-2022_0389-0386-0002

Commenter Type: Private Citizen

Commenter: Rebecca Baggett

Organization:

Excerpt Text:

I write to you as a concerned citizen and grandmother, to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher lead levels in their blood. As a mother and grandmother, this appalls me. The actions and inactions of the Trump administration have delayed progress toward environmental protections in every arena, impacting our health and the health and wellbeing of future generations. Banning avgas cannot and should not wait. [FL TEXT REMOVED] Sincerely, Rebecca Baggett
Athens, GA 30605

Comment Number: EPA-HQ-OAR-2022_0389-0433-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

I ask you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Studies have shown that children who live near airports have higher levels of lead in their blood.

Comment Number: EPA-HQ-OAR-2022_0389-0448-0004

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz
Organization:

Excerpt Text:

Innocent people, including children under the age of 5, live near the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have high, and clearly unsafe, levels of lead in their blood. Most of the US airports with the highest toxic lead emissions are located within communities of color.

Comment Number: EPA-HQ-OAR-2022_0389-0471-0001

Commenter Type: Private Citizen

Commenter: Sonja Hahn

Organization:

Excerpt Text:

I live a distance away from an airport north of Denver but the small and noisy planes pass low overhead. The newspaper stated that children who live within several miles of the airport have a higher level of lead in their systems, this is unacceptable.

Comment Number: EPA-HQ-OAR-2022_0389-0482-0001

Commenter Type: Private Citizen

Commenter: Stanislav Pakarin

Organization:

Excerpt Text:

Hello, my name is Stan and I live close to the Reid Hillview Airport. I am engaged and my partner and I are excited to start a family together. However, after reading Santa Clara's study proving children close to the airport have higher levels of lead in their blood, we are very concerned about the schools our children will go to and their proximity to leaded fuel aircraft engines. My family and every other family living near the airport are at elevated risk for harmful lead exposure. I want to urge the EPA for the sake of my community to finalize its finding that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0485-0001

Commenter Type: Private Citizen

Commenter: Italia Salvaje

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

Hi, my name is Italia and I live near Reid Hillview Airport where planes use lead in their gasoline. I am concerned about my community and want to urge EPA to finalize its finding that lead emissions from covered aircraft engines that use leaded fuel endanger human health. A 10-year data study confirmed locally that children living near Reid Hillview Airport had at an elevated risk of harmful lead exposure. I plead with you to protect our community.

Comment Number: EPA-HQ-OAR-2022_0389-0510-0001

Commenter Type: Private Citizen

Commenter: Charlene Willey

Organization:

Excerpt Text:

The lead emitted from piston engine aircraft is one of the greatest health care scandals in our country's history. Millions of children are exposed to dangerous lead emissions every year....at levels equivalent to the Flint MI water crisis at its peak. But it continues, year after year. The impact is lifelong. As the parent of an adult child with disabilities similar to those suffered by children poisoned by lead early in life, I can give testimony to the costs, to society, to the individual and to their families, of this contamination. There is NO excuse. Regulate lead emissions immediately. This becomes a social justice issue when we realize that less than 1% of the wealthiest in our population is holding the EPA hostage to their own personal needs. THERE ARE NO EXCUSES FOR DELAY!

Comment Number: EPA-HQ-OAR-2022_0389-0516-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Henry

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, causes devastating impacts. Lead exposure also caused serious illness in adults, including cancer and cardiovascular disease. Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. Many studies have shown that children who live near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Sincerely, Elizabeth Henry Charlotte, NC 28205

Comment Number: EPA-HQ-OAR-2022_0389-0520-0001

Commenter Type: Private Citizen

Commenter: Margaret Kitts

Organization:

Excerpt Text:

I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Exposure to lead can result in devastating impacts on health. , especially in young children. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Banning avgas must be d e now. [FL TEXT REMOVED] This is a serious danger! The time for change is now! Please finalize this endangerment finding as soon as possible and immediately work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Margaret Kitts Lake Forest, CA 92630

Comment Number: EPA-HQ-OAR-2022_0389-0530-0002

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

The inequity is extreme. A study commissioned by the County of Santa Clara on lead exposure risks for children living in the area around Reid-Hillview Airport in East San José found that the continued use of leaded aviation fuel has contributed to increased blood lead levels, particularly for those within a half-mile of the facility. ? This peer-reviewed study found that children living downwind from the airport had higher blood lead levels, with increases of .40 micrograms per deciliter, over children living upwind from the airport. For context, lead levels detected during the peak of the Flint Water Crisis were between .35 and .45 micrograms per deciliter over baseline. The study also examined levels during times of maximum exposure to air traffic for children within a half-mile of the airport and estimated an increase of .83 micrograms per deciliter at peak times - significantly higher than the levels seen in Flint."

Comment Number: EPA-HQ-OAR-2022_0389-0533-0003

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

A study commissioned by the County of Santa Clara on lead exposure risks for children living in the area around Reid-Hillview Airport in East San José found that the continued use of leaded aviation fuel has contributed to increased blood lead levels, particularly for those within a half-mile of the facility. ? This peer-reviewed study found that children living downwind from the airport had higher blood lead levels, with increases of .40 micrograms per deciliter, over children living upwind from the airport. For context, lead levels detected during the peak of the Flint Water Crisis were between .35 and .45 micrograms per deciliter over baseline. The study also examined levels during times of maximum exposure to air traffic for children within a half-mile of the airport and estimated an increase of .83 micrograms per deciliter at peak times - significantly higher than the levels seen in Flint."

Comment Number: EPA-HQ-OAR-2022_0389-0556-0001

Commenter Type: Private Citizen

Commenter: Patrice Curedale

Organization:

Excerpt Text:

[FL TEXT REMOVED] One Santa Clara, CA study found that children living around a small airport had lead levels similar to those found in Flint, Michigan children at the height of their water, crisis! This danger has been documented for decades. And studies around small airports do not even touch on our agriculture's use of piston engine planes. As the small plane industry booms, in spite of the climate crisis, it is contributing to lead pollution, water, pollution, noise, pollution, and very deadly small particulate pollution. Lead pollution is actually the easiest of these to tackle. Where is your concern? [FL TEXT REMOVED] Sincerely, Patrice Curedale Topanga, CA 90290

Comment Number: EPA-HQ-OAR-2022_0389-0560-0001

Commenter Type: Private Citizen

Commenter: Sheri Kuticka

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can impact health. Lead exposure is responsible for illness in adults, including cancer and cardiovascular disease. [FL TEXT REMOVED] Children who live near airports have higher levels of lead in their blood.. [FL TEXT REMOVED] Please finalize this endangerment finding and ban leaded avgas. Sincerely, Sheri Kuticka Concord, CA 94518

Comment Number: EPA-HQ-OAR-2022_0389-0575-0001

Commenter Type: Private Citizen

Commenter: Ruth Fruland

Organization:

Excerpt Text:

Lead is poison. Finalize the endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the USA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Ruth Fruland Seattle, WA 98115

Comment Number: EPA-HQ-OAR-2022_0389-0607-0001

Commenter Type: Private Citizen

Commenter: Pamela Lowry

Organization:

Excerpt Text:

As we've already seen, lead exposure, particularly during childhood, can result in devastating impacts on health, something that has impacted my own family as we lived in an area of DC that turned out to have lead water pipes while my son was growing up. But lead exposure also affects adults and is responsible for serious illnesses, including cancer and cardiovascular disease. As for leaded aviation gasoline, over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have higher levels of lead in their blood, and appallingly,

Comment Number: EPA-HQ-OAR-2022_0389-0621-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Ann Dowds

Organization:

Excerpt Text:

It is a known health problem for all people especially children. Our nation has eliminated lead from most vehicles, pipes, paint and solder used in manufacturing . Pediatricians across our country tested children for lead because China had used at point lead paint on toys! The health consequences can not be ignored and have a healthy economy especially since Covid is still a concern for people with underlying health issues. 2020 has proven to have a healthy economy you need a healthy population. Today my daughter is walking to and from school with airplanes flying into Florida for tourist season. It shouldn't be a Health Risk to take a walk for anyone. Please Ban aviation gasoline

Comment Number: EPA-HQ-OAR-2022_0389-0696-0004

Commenter Type: Private Citizen

Commenter: Mary Walker

Organization:

Excerpt Text:

Multiple studies have shown that children who live near airports have higher levels of lead in their blood" (Environmental Protection Agency, 2022).

Comment Number: EPA-HQ-OAR-2022_0389-0698-0002

Commenter Type: Advocacy Organization

Commenter: Annakaren Ramirez

Organization: Pacoima Beautiful

Excerpt Text:

A study conducted in a San Jose community living next the reid hill view airport found that Children within a 1/2 mile from the airport had a blood lead level (BLL) of 1.93 micrograms per deciliter on average (similar lead exposure levels as the Flint Michigan water crisis). Banning leaded aviation fuel is an important step in protecting vulnerable frontline communities

Comment Number: EPA-HQ-OAR-2022_0389-0709-0001

Commenter Type: Private Citizen

Commenter: Yasmin Mata

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I urge EPA to finalize their findings concluding that lead emissions from aircraft engines that use fuel containing lead endanger human life. I arrived from Colombia three years ago and, as a mother raising a two-year-old girl, I am concerned about the study showing that children near the airport have high lead levels in their blood. It is alarming what this exposure to lead is causing people living in this airport area where airplanes use lead.

Comment Number: EPA-HQ-OAR-2022_0389-0719-0001

Commenter Type: Private Citizen

Commenter: Barbara Fuoco

Organization:

Excerpt Text:

According to the EPA, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have higher levels of lead in their blood

Comment Number: EPA-HQ-OAR-2022_0389-0720-0002

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. It's time to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0751-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is a persistent, cumulative toxin that never goes away; it stays in the environment and is difficult or impossible to mitigate. There is no safe level of exposure, and lead exposure has been associated with a multitude of health problems. Yet, decades after it was banned in products and automobile fuel, private industry is still allowed to poison people living around airports. Children living near airports or attending school under a flight path may be afflicted with health issues for the rest of their lives. Pilots and others who need to service and clean the lead out of plane engines may not only expose themselves but also bring home lead on their clothing to their families and expose them. The Reid-Hillview study showed that children living near the airport had lead exposure blood levels at the same level- and sometimes exceeding- children exposed to lead in Flint, Michigan. This is a health EMERGENCY.

Comment Number: EPA-HQ-OAR-2022_0389-0756-0001

Commenter Type: Private Citizen

Commenter: Cynthia Allison

Organization:

Excerpt Text:

Millions of people live within a half-mile of the many airport facilities in the US, and many schools are also located in this radius. Studies have shown that children living near airports have higher than normal levels of lead in their blood. It's time to relegate leaded aviation fuel to the "good old days", and move into a future that doesn't contain leaded gas.

Comment Number: EPA-HQ-OAR-2022_0389-0768-0001

Commenter Type: Private Citizen

Commenter: Edward L. Simpson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Now is the time to finalize an endangerment finding for leaded aviation gasoline. We must also adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. People live near airports! Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color. The time is now. Please finalize this endangerment

finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Edward L. Simpson South Pasadena, CA 91030

Comment Number: EPA-HQ-OAR-2022-0389-0138-0003

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

The context of the Reid-Hillview Airport case exposes a notable perspective; [bold: of the 3 million children who live within a half mile of this airport, blood lead levels were found to have risen by 0.2 micrograms per deciliter, which is equivalent to half the increase in children's lead levels from the Flint, Michigan water crisis, and those downwind of the airport were found to have blood lead levels approaching those from the same crisis.] [Footnote 5: Pulitzer Center. (2022). Do You Live Close Enough to a Small U.S. Airport To Have Lead Exposure? Available at: <https://pulitzercenter.org/stories/do-you-live-close-enough-small-us-airport-have-lead-exposure-check-our-maps#:~:text=On%20average%2C%20the%20blood%20lead,lead%20in%20their%20drinking%20water>] In contrast with national attention for Michigan, for which the state was encouraged to fund both cleanup efforts and full health care coverage for those affected, [Footnote 6: Michigan Department of Health & Human Services. (2022). Health Care Coverage for People Impacted by Flint Water. Available at: <https://www.michigan.gov/mdhhs/assistance-programs/flinthealth/health-care-coverage-for-people-impacted-by-flint-water>] I question why leaded avgas in piston-powered general aviation aircrafts are only now being federally addressed. Similarly, mounting public attention over lead-based paints and leaded gas contributed to bans in 1978 and 1996, respectively, though addressing leaded avgas has been delayed until 2022. I would urge the Administrator to note this disparity in federal priority and ensure that this public health threat, which is quieter but more temporally enduring, gains sufficient regulation.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Findings from multiple airport lead studies have shown that children living in proximity to airports have elevated blood lead levels, in some cases equal to or greater than those detected during the Flint water crisis.

Comment Number: EPA-HQ-OAR-2022-0389-0174-0002

Commenter Type: Private Citizen

Commenter: Glen Anderson

Organization:

Excerpt Text:

ESPECIALLY AT RISK are children, people of color, pregnant mothers, newborns, unborn fetuses, and low-income people. IF YOU CARE ABOUT THEM YOU WILL SHARPLY REDUCE AIRPLANE POLLUTION!!!!

The EPA reports that approximately 5.2 million people live within 500 meters of an airport runway,

363,000 of whom are children age five and under. The EPA also estimates that “573 schools attended by 163,000 children in kindergarten through twelfth grade are within 500 meters of an airport runway.” Millions more are at risk by virtue of living within 1000 to 1500 meters of airport runways. Others are subjected to multiple daily dustings of this toxin from repetitive flight training activity.

Many studies have found children living near airports have dangerously high amounts of lead in their blood. DO YOU CARE ABOUT CHILDREN OR NOT????? Would you want YOUR OWN CHILDREN to suffer? If not, then PLEASE DO NOT MAKE OTHER CHILDREN SUFFER!!!!

The FAA has known about this problem FOR DECADES -- BUT KEEPS FAILING TO TAKE NECESSARY ACTIONS!!!! THIS IS A SCANDAL!!!!

LOCAL GOVERNMENTS MUST BE EMPOWERED TO TAKE ACTIONS TO PROTECT THE HEALTH OF LOCAL PEOPLE, since the FAA has become corrupted and failed to do its job!!!!

I STRONGLY URGE THE ENVIRONMENTAL PROTECTION AGENCY to issue an endangerment finding on this toxic fuel as quickly as possible!!!!

Comment Number: EPA-HQ-OAR-2022-0389-0182-0001

Commenter Type: Private Citizen

Commenter: David Nguyen

Organization:

Excerpt Text:

We would like to provide supporting evidence regarding [Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare]:

Research should be done locally in neighborhoods located near airports to determine the levels of lead in individual blood levels; specifically children.

A study done on how airport emissions affects human health and are linked to several health effects including cancer, inflammation, and asthma, especially those who work in airports and residents who live in surrounding areas.

Comment Number: EPA-HQ-OAR-2022-0389-0182-0002

Commenter Type: Private Citizen

Commenter: David Nguyen

Organization:

Excerpt Text:

Point A:

A study done in 2021 in the County of Santa Clara has found that children living near the Reid-Hillview Airport in east San Jose, CA had increased levels of lead in their blood as a result of increased usage of leaded aviation fuel, specifically those living within a half mile radius of the airport. The peer-reviewed study done by Dr. Sammy Zahran and the Mountain Data Group found that "children who live within a half-mile of the airport had blood lead levels 20% higher than children living between half-mile to 1.5 miles from the airport," (County of Santa Clara, 2021). Not to mention, children who commuted to school

in the direction towards the airport had higher lead levels in their blood compared to those commuting away from the airport's direction.

Evidently, this is just one study done at a small airport funded by the county for non commercial flight planes; yet, the levels of lead found in children living within the area is significant and can foresee future health complications. Thankfully, as this airport relies on federal grants to be funded, the county voted several years ago to stop accepting FAA grants to keep it open; currently federal funding is set to run out in 2031, (County of Santa Clara, 2021).

Taking into account your regulation on aircraft lead air pollution on public health endangerment and welfare, it is a worthy consideration to conduct studies in neighborhoods located near airports to compare how much lead exposure individuals and children are exposed from one location to another. Moving forward from the data collected on lead exposure in relation to aircraft functioning on leaded fuel, we can push for better changes for the public health for all.

Comment Number: EPA-HQ-OAR-2022-0389-0166-0001

Commenter Type: Private Citizen

Commenter: Marilu Zepeda

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I am Marilu, I have been living to the east of San Jose for many years and I live near an airport that still has piston-powered aircraft service and according to the lead study carried out in this sector this Reid-Hillview is associated with air pollution and is a danger to my family's health and that of the entire population that lives near this airport. They also pollute the trees and food, and breathing this pollution is a hazard to everyone's health. I ask the government not to let these planes use leaded gasoline any longer.

Comment Number: EPA-HQ-OAR-2022-0389-0171-0002

Commenter Type: Private Citizen

Commenter: Rita Birrueta

Organization:

Excerpt Text:

EPA translation of Spanish language comment: I feel unprotected since it is a problem for the health of everyone who lives here. My community is being affected. There are 354 apartments and more than 3,000 people among the adults and children living in this single complex now, plus the other complexes that are around in a hazard to public health. Our children have autism problems, learning disabilities, speech problems, behavioral problems that according to the study are the result of lead contamination. Now not only the apartments but all the schools that are around Reid-Hillview Airport. This airport within a residential area is a great risk. The danger is latent. How many airplanes have we seen fall on the houses, and it is not just the pollution, but the fear of an accident inside our homes. We ask you, Gentlemen of the Government, to protect us from this lead contamination, and from the dangers, so that we avoid health disasters that may befall you, causing great liability.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0003

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

Throughout the rule proposal, the EPA examines why this ruling must be instated. It is apparent that living or working near lead-emitting sources does increase levels of lead in the bloodstream [Footnote 3: Federal Register/Vol. 87, No. 199/Monday, October 17, 2022/Proposed Rules pg. 62758]. Increased blood-lead levels have been found in people living near airports where lead emissions are likely to occur from aircraft operating on leaded fuels [Footnote 4: Ibid]. And thus, it stands to reason that, if heightened lead levels in the blood have negative health effects, then lead emissions pose a large threat for people that live near airports. The EPA has found a causal relationship between lead levels in the blood and deleterious health effects [Footnote 5: Ibid. pg. 62775]. In children, lead exposure has been found to cause decreased cognitive function, developmental defects, depression, anxiety, and many other injurious health outcomes [Footnote 6: Ibid]. In adult populations, lead exposure has been found to cause hypertension and other serious cardiovascular issues, as well as diminished cognitive function [Footnote 7: Ibid. pg. 62776]. This link between lead exposure and detrimental health effects helps prove that lead-emitting sources need to be regulated. The need for regulation of aircraft engines that use leaded fuels is even more apparent when we consider who is impacted by the lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0010

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

The Airport Cooperative Research Program (ACRP) promoted, sponsored & championed by the Transportation Research Board Cooperative Research Programs (TRBCRP) | Transportation Research Board (TRB) | National Academies (NA) Sciences (NAS), Engineering (NAE), Medicine (NAM) paid to conduct research lasting: 681 days | 1 Year 10 months 11 days | 22 months 11 days:

ACRP 02-57 [Final] Reducing the Impact of Lead Emissions at Airports (html)

Funds: \$200,000

Effective Date: 7/28/2014

Completion Date: 6/8/2016

Background: While leaded fuel has been banned in [bold: almost all] other transportation applications, it is still being used by piston engine aircraft. For over two decades, there have been efforts to find a replacement for leaded avgas. While a replacement has not yet been fully developed or vetted, it is believed that there will likely be fueling infrastructure and other airport challenges before any replacement can be fully implemented. Addressing these challenges will take many years to ensure that the industry is able to safely transition. There may be practices that airports can adopt to reduce baseline lead emissions and/or exposure and may be able to mitigate, if not reduce, lead emission impacts. For example, one mitigation strategy may be to move the run-up area. But, airports need to understand all considerations of the mitigation strategies.

Objective: The objective of this research was to develop guidelines for airports on minimizing lead emission impacts.

Status: This has been published as Report 162: Guidebook for Assessing Airport Lead Impacts.

In the FINAL ACRP 162 report there is NO mention or reference to key pivotal research that was known & identified at the time:

“S. Zahran, T. Iverson, S. McElmurry, and S. Weilar. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. August 2014. Available at <http://mpr.aub.uni-muenchen.de/62238/> “

However, there is an overlooked remnant, a remaining “breadcrumb”, an early overlooked & obscured “working version”, a copy of the research report that clearly shows the SMEs WERE aware of this key study at the time:

Project No. ACRP 02-57, COPY NO. 1, “REDUCING THE IMPACT OF LEAD EMISSIONS AT AIRPORTS” http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_162.docx

NOTE: this paper has zero identifying information to link or even relate “Project No. ACRP 02-57, COPY

NO. 1” to Airport Cooperative Research Program (ACRP) Research “Report 162: Guidebook for Assessing Airport Lead Impacts”, as well as several key typos that render & obscure the initial reference or mention of the study practically useless and un-findable:

- NO easily findable link to this key pivotal MS Word Doc / reference anywhere
- Misspelled Well Known Lead Author’s name: “Zaharn” S/B “Zahran”
- The URL link contains a dot “.” Should really be a dash “-“ or link does NOT work
- Broken link: “<http://mpr.aub.uni-muenchen.de/62238/>”
- Correct link: “<http://mpr.aub.uni-muenchen.de/62238/>”

Are these ‘Innocent’ omissions or typos? Or purposely overlooked, obscured, or excluded as part of an attempted coverup stalling tactic that appears to have worked, e.g. this delayed public exposure or notice for several precious years? Again, why wasn’t this key reference included in the Final ACRP Report 162: Guidebook for Assessing Airport Lead Impacts (html)? The SMEs surely understood the significance of THIS reference? If not WHY NOT? What’s the excuse now?

Appears to be pretty sloppy amateur or possibly sneaky “conflict of interest(s)” moves for a Team of World Class “Advanced” research SMEs on behalf of the National Academy of Sciences (NAS) that were well paid \$200,000.00 USD to produce a single 94 page MS Word document resulting in a 33 page final PDF file. Wow, that’s roughly \$6060.00 USD per finished final page! What’s wrong with this picture?

Comment Number: EPA-HQ-OAR-2022-0389-0203-0004

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

Based upon our understanding of one recently published statistical report analyzing such emissions in California, the [Bold: incremental increase] in blood lead levels purported to be from 100LL (leaded) avgas exhaust exposure for children ≤ 6 years of age, living in close proximity to one active airport, averaged about 0.12 micrograms per deciliter and increased up to 0.25 micrograms per deciliter for areas downwind (East) of the airfield. This increase is above an [Bold: average baseline blood lead level] of 1.81 micrograms per deciliter for children who live a bit further from this airfield. Statistical analyses were then performed on 16,092 samples to reflect the impact of nine control variables including the volume of air traffic, wind patterns, and airfield proximity for local children whose blood was sampled during the study period from 2011 to 2020. These statistics furthered the point that toxic lead exhaust emissions in close proximity to neighboring airport communities can increase with heavy air traffic using 100LL avgas which could result in increased exposure to toxic lead. We recognize that the key findings, including the study’s highest “predicted” blood lead level of 2.22 micrograms per deciliter, tabulated using all nine control variables for children ≤ 6 years of age, averaged 36% below the current 3.5 micrograms per deciliter threshold established by the CDC as the Blood Level Reference Value (i.e. the

CDC's "level of concern") for blood lead levels in children ages 1 to 5. Nevertheless, based upon the national concern for cumulative long-term exposures from [underlined any] lead exhaust emissions due to 100LL, [bold: Swift Fuels believes firmly that the EPA should actively seek all practical means of eliminating toxic lead exposure from all sources - a clear public health priority - including the elimination of 100LL exhaust emissions as a major positive step forward for our environment.] The data above purportedly confirms that 100LL toxic emissions do impact nearby airport communities. Thus, the elimination of tetraethyllead from 100LL should reduce the reported early childhood lead exposures up to 7% generally and up to 22% in the highest risk communities, i.e. those primarily in close proximity and downwind of airfields especially during high traffic periods. However, because lead would still persist in our environment, Swift Fuels also advocates broad public education about lead, its sources, and various actions parents can take to monitor and safeguard their young children, including periodic medical checkups, removal of lead paint, and dietary considerations, among others.

Comment Number: EPA-HQ-OAR-2022-0389-0205-0001

Commenter Type: Private Citizen

Commenter: Gavin Grant

Organization:

Excerpt Text:

Lead levels in children near airports is dangerously high. In a New Scientist article posted this week (link below), they report that small planes using leaded aviation fuel "are responsible for two-thirds of lead pollution in the US" and "the closer children lived to the airport, the more likely they were to have a blood lead level of higher than 4.5 micrograms per decilitre, which California has defined as a threshold of concern." I would like to ask the EPA to move forward with a ban on leaded fuel for small planes. And perhaps a study of lead levels in the blood of children living near the 20,000 general aviation airports nationwide could be funded? Thank you. Gavin J. Grant Northampton, MA <https://www.newscientist.com/article/2353962-children-living-near-airport-found-to-have-raised-lead-levels-in-blood/>

[Attachment 1: Article titled "Children living near airport found to have raised lead levels in blood"]

[Attachment 2: Journal article titled "Lead exposure from general aviation emissions in the UK: a review and call for action"]

Comment Number: EPA-HQ-OAR-2022-0389-0207-0002

Commenter Type: Private Citizen

Commenter: Wisconsin Ecolatinos

Organization:

Excerpt Text:

Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The Lead effects most likely to be encountered in current populations are neurological effects in children. Infants and young children are especially sensitive to lead exposures, which may contribute to behavioral problems, learning deficits and lowered IQ.[Footnote 1: <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution>]
- According to Miranda et al.[Footnote2: A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels Marie Lynn Miranda,Rebecca Anthopolos, and Douglas Hastings], Early

childhood blood lead levels as low as 2 µg/dL can have significant impacts on academic performance -In response to this body of research, the CDC has stated that there is no safe level for blood lead in children (CDC 2005).[Footnote 3: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3230438/#r5>]

- Children highly frequent the area surrounding the Middleton Municipal Airport with a population of 4000 to 5000 children spending significant time in the area; within two miles of the Middleton Municipal Airport (C29), there are three pre-schools; Primrose School of Middleton, Little Red, and Clubhouse for kids, two elementary schools; Sauk Trail and Northside Elementary, the Middleton High School and Kromrey Middle school and several kids' sports venues, such as Keva Sports Center, Middleton Gymnastics, Airport Soccer fields, and parks.

Comment Number: EPA-HQ-OAR-2022-0389-0211-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Indeed, a recent study documented elevated lead concentrations in the air around a small airfield in Wisconsin [Footnote 1: Data available here: https://town.middleton.wi.us/vertical/Sites/%7B97A50AAB-3824-4833-ACEA-EF2B9A14C856%7D/uploads/USGS_Morey_Airport_Presentation.pdf], mirroring studies from elsewhere finding elevated environmental lead concentrations near airports [Footnote 2: E.g., McCumber and Strevett. 2017. A geospatial analysis of soil lead concentrations around regional Oklahoma airports. *Chemosphere* 167:62-70; Carr et al. 2011. Development and evaluation of an air quality modeling approach to assess near- field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment* 45: 5795-5804] and elevated blood lead levels in children living near airports.[Footnote 3: E.g., Miranda et al. 2011. A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels. *Environmental Health Perspectives* 119: 1513-1516; Zahran et al. 2017. The effect of leaded aviation gasoline on blood lead in children. *Journal of the Association of Environmental Research Economics* 4: 575-610; Zahran et al. 2022. Leaded aviation gasoline exposure risk and child blood lead levels. *PNAS Nexus* 1: 1-11.]

Comment Number: EPA-HQ-OAR-2022-0389-0213-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

In addition to inhalation of indoor and outdoor air, people can be exposed to lead from aircraft emissions by ingesting lead deposited in dust, soil, surface water, and vegetation [87 Fed. Reg. 62775]. A 2017 analysis of blood lead levels of more than a million Michigan children found increased blood lead with proximity to airports, with the volume of piston-engine aircraft traffic, and with the percentage of days when the prevailing wind was in the direction of a child's residence.[Footnote 2: Zahran, S.; Iverson, T.; McElmurry, S.P.; Weiler, S. The effect of leaded aviation gasoline on blood lead in children. *J. Assoc. Resour. Environ. Econ.* 2017, 4, 575–620. <https://www.journals.uchicago.edu/doi/10.1086/691686>.]

Comment Number: EPA-HQ-OAR-2022-0389-0214-0002

Commenter Type: State Government

Commenter:

Organization: State of California, Department of Public Health (CDPH)

Excerpt Text:

The health impacts of such lead exposure have been measured several ways. The Technical Support Document for this proposed endangerment finding notes that in 2012 two California airports - McClellan-Palomar Airport and the San Carlos Airport - were out of compliance with the health-based National Ambient Air Quality Standard for lead. Since then other studies have measured the potential harmful IQ impacts of childhood lead exposure from AvGas.

In the case of Santa Clara County, CA, results of a study published this month in Proceedings of the National Academy of Sciences Nexus concluded deposition of AvGas significantly elevated the blood lead levels of at-risk children. In response to early results of that study and community concerns Santa Clara County imposed a ban on AvGas at Reid-Hillview Airport and San Martin Airport that went into effect in 2022.

Such actions have environmental justice implications as non-Hispanic black children continue to be disproportionately threatened with elevated blood lead levels. California is one of nine states where the Black population is a greater fraction of the population living in the near-airport environment by a difference of one percent or greater compared with the state as a whole.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0002

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Continuing to allow the use of leaded aviation fuel is indefensible. We have known since 2005 that "...no level of lead in a child's blood can be specified as safe..." [Footnote 1: 2005 "...no level of lead in a child's blood can be specified as safe..." Preventing Lead Poisoning in Young Children, A Statement by the Centers for Disease Control and Prevention, August 2005, U.S Dept. of Health and Human Services. 2012 "No safe blood level has been identified" CDC Response to Advisory committee on Childhood Lead Poisoning Prevention Recommendation in Low Level Lead Exposure Harms Children: A Renewed Call of Primary Prevention", 6-7-12 http://www.cdc.gov/nceh/lead/acclppcdc_response_lead_exposure_recs.pdf]. We also know "...there is no evidence of a threshold below which there are no harmful effects on cognition from Pb [lead] exposure." [Footnote 2: Integrated Science Assessment for Lead, page lxxxviii (EPA/600/R-10/075F | June 2013 | www.epa.gov)]. And we now know that children, who live near airports where leaded fuel is used, have higher blood lead levels the closer they are to the airport: [Italics: (2011 Miranda Study) [Footnote 3: A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels, Miranda, M. L., Anthopolos, R., and Hastings, D. Environmental Health Perspectives, 119(10):1513–1516, 2011. <http://dx.doi.org/10.1289/ehp.1003231>, Online 13 July 2011 ehponline.org] [Italics: 2017 Michigan Study] [Footnote 4: The Effect of Leaded Aviation Gasoline on Blood Lead in Children, Sammy Zahran, Terrence Iverson, Shawn P. McElmurry, Stephan Weiler Received April 7, 2015; Accepted September 29, 2016; Published online April 11, 2017. JAERE, volume 4, number 2. (copyright) 2017 by The Association of Environmental and Resource Economists. All rights reserved. 2333-5955/2017/0402-0007 \$10.00 <http://dx.doi.org/10.1086/691686>], 2021 Reid-Hillview Study [Footnote 5: Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California Mountain data group, 8-3-2021. Also see: Leaded aviation gasoline exposure risk and child blood lead levels, Sammy Zahran, Christopher Keyes, Bruce Lanphear, PNAS Nexus, Volume 2, Issue 1, March 2023, [pgac285](https://doi.org/10.1093/pnasnexus/pgac285), <https://doi.org/10.1093/pnasnexus/pgac285> Published: 10 January 2023]].

Comment Number: EPA-HQ-OAR-2022-0389-0217-0004

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

As a pediatrician, when I was able to use a lab that had the capability to measure very low blood lead levels, I found that 85 percent of my toddlers had detectable levels of lead. The results ranged from 0.3 - 4.7 micrograms per deciliter (ug/dl). The average was 1.2 ug/dl which is 75 times higher than the estimated pre-industrial blood lead level of 0.016 ug/dl. [Footnote 6: "Lead Levels in Preindustrial Humans", Letter to the Editor, New England Journal of Medicine, Vol. 326, No. 19, 1992, May 7, p 1293-4.] After receiving the results, I would inform parents of possible sources for the lead found in their child. For parents that lived near our [Italics: Hillsboro Airport (HIO)], where aircraft emit about two-thirds of a ton of lead annually [Footnote 7: https://earthjustice.org/sites/default/files/files/top100leadpollutingairports_2021-08-23.pdf], the only remedy I could suggest for them was to move. One mother told me she wished she could, but she couldn't, as she was on welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0218-0002

Commenter Type: Private Citizen

Commenter: Corinne Greenman

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

The Dr. Lynn Miranda's study [Bold: "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels"] (2008 - 2011) proved that children living near general aviation (GA) airports were being subjected to lead emissions from GA aircraft. She writes: "Our results suggest that children living within 500 m of an airport at which planes use leaded avgas have higher blood lead levels than other children. This apparent effect of avgas on blood lead levels was evident also among children living within 1,000 m of airports. The estimated effect on blood lead levels exhibited a monotonically decreasing dose-response pattern, with the largest impact on children living within 500 m". The "m" is meters.

Her conclusion: "We estimated a significant association between potential exposures to lead emissions from avgas and blood lead levels in children. Although the estimated increase was not especially large; the results of this study are nonetheless directly relevant to the policy debate surrounding the regulation of leaded avgas."

The study was conducted over 6 counties and 66 airports in North Carolina. The aviation gas data was provided by the EPA along with some grant money.

The total combined amount of lead emissions from all 66 of these airports as reported in 2008 was a little over 1 ton (2000 lbs.). In 2008, combining any two of the top 10 lead emitting GA airports in the US would have been more than all the 66 airports in this study. The EPA knew this as they have National Emissions Inventory (NEI) data going back further than 2008.

Didn't these results scream out for a study to be performed on children that live near a high lead emissions airport as soon as possible? How long should policy be debated when children are being subjected to this harmful toxin? The EPA never intended to repeat a test with blood lead levels of children.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

On 1/10/2023 the National Academy of Sciences Journal, Nexus, published, [Bold: "Leaded aviation gasoline exposure risk and child blood lead levels"] by Dr.Sammy Zahran, Christopher Keyes and Dr. Bruce Lanphear. The lead study was first brought to the attention of the general public on Aug 3, 2021. It was conducted at Reid-Hillview airport in San Jose, California. Similar to the Miranda study, blood lead samples were analyzed on the children living near this airport. Reid-Hillview airport (RHV) had about half of the total emissions of the combined 66 airports in the Miranda study. What type of results did this bring?

Instead of a conclusion, Dr. Zahran offers this [Bold: Significance Statement:] "In the United States, hundreds of millions of gallons of tetraethyl lead-formulated gasoline are consumed by piston-engine aircraft (PEA) annually, resulting in an estimated half-million pounds of lead emitted into the environment. About four million persons reside, and about six hundred K-12th grade schools are located, within 500 meters of PEA-servicing airports.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

In January 2022, the US Environmental Protection Agency launched a formal evaluation of "whether emissions of lead from PEA cause or contribute to air pollution that endangers public health or welfare." In support of the EPA's draft endangerment finding and request of public comment, an [Bold: ensemble of evidence] is presented indicating that the deposition of leaded aviation gasoline [Bold: significantly elevates the blood lead levels of at-risk children".]

According to EPA data, there are actually 1 million pounds of lead emitted each year into the environment by GA aircraft. Since the Miranda study, millions of dollars have been spent on air monitoring and quantifying airport lead emissions. The modeling for how lead emissions were calculated was changed during the Miranda study and now airports were showing less lead emissions. It doesn't matter how many air samples that were taken or modeling that was changed, if the children still had lead in their blood, how meaningful were they?

Comment Number: EPA-HQ-OAR-2022-0389-0221-0003

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

5) Blood lead levels of children living near a group of 27 Michigan airports have been found to be negatively influence by piston-engine aircraft activity at that group of airports, which includes Cherry Capitol Airport (airport code TVC). This identification of a causal relationship between piston-engine aircraft activity and near-airport childrens' blood lead levels has been documented in airport settings elsewhere in the U.S. These peer- reviewed studies are cited below.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0005

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

7) The lead particulates released by piston-engine aircraft are several nanometers in size – extremely small, which facilitates respiratory uptake into the blood of children and into the blood of humans in general. Additionally, children have a higher respiration rate than adults, which unfortunately facilitates greater lead uptake from ambient air contaminated by lead particulates from piston-engine aircraft operations.

8) The CDC indicates that: “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to negatively affect a child’s intelligence, ability to pay attention, and academic achievement.” (see: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>, accessed January 11, 2023)

Comment Number: EPA-HQ-OAR-2022-0389-0221-0007

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Piston-engine aircraft lead particulate emissions and the related environmental exposures are a major public health issue, mainly for the impacted individuals, schools, neighborhoods and communities but also for our society at large. As the CDC states, there is no safe level for lead exposure for humans, especially when it comes to infants and children.

Next, I review some recent published research and air quality studies. What follows in the next few pages is not a literature review, it is not an air quality tutorial and it is definitely not a toxicological or human health primer. There are many important peer- reviewed and published studies to consider for a comprehensive understanding of the relevant principles and applications as concerns lead particle emissions from piston- engine aircraft, their fate in the environment, human exposure and uptake of lead particulates and the consequent health impacts of neurotoxic lead poisoning.

Instead, I am providing illustrations and examples that have been used to document that lead from piston-engine aircraft emissions has quantifiable effects on near- airport children’s blood lead levels. Also, I am

providing illustrations and examples as to how lead particulates from piston-engine aircraft emissions are both forecast using air quality modeling to be present in ambient air at ground level near a specific airport with known quantified piston-engine aircraft activity and are also observed through confirming field measurements to be present in ambient air at ground level in the vicinity of the same airport. Ground level is where lead particle exposure to children and others occurs and inhalation is likely the most prevalent, but by no means the only, human exposure mechanism as far as aviation-sourced lead particulates are concerned. Exposure can occur presumably due to inhalation of what I call primary concentrations of ambient air lead particulates, sourced from leaded gas-burning piston-engine aircraft, before primary lead particle deposition has occurred, or from inhalation of what I will call secondary ambient air lead particulates, re-suspended by wind and other disturbances (e.g., lawn mowing, leaf blowing, vehicular traffic, street sweeping, etc.) after primary deposition has occurred. There could be many cycles of such re-suspension followed by re-deposition. There is no reason that primary and secondary concentration fractions of lead particulates cannot exist at the same time in ambient air, depending on local conditions.

The illustration below, inclusive of panel A, panel B and the figure caption is from a relatively recent publication by Zahran et al. (*The Effect of Leaded Aviation Gasoline on Blood Lead in Children* (2017), *JAERE* vol. 6 no. 2, pp. 575-610) that considered a group of 27 airports in Michigan that includes, I have been told, Cherry Capitol Airport. The upper illustration (panel A) shows average blood levels (y-axis) on a monthly basis for near-airport children as a function of time (x-axis), together with monthly piston engine aircraft traffic (departures and landings) on the y-axis for all airports as a function of time. Zahran et al (2017) state (bracketed items added for clarification):

While figure 2, panel A, is strongly suggestive of an avgas [aviation gas] and BLL [blood lead level] link, recall that soil resuspension [of lead] is a known source of seasonal variation in child BLLs (Zahran et al. 2013). Panel B addresses this potential confounding. Again, time is on the x-axis, but now monthly average BLL is divided into two categories: above average and below average PEA [piston-engine aircraft] traffic. The series diverge intuitively with the high traffic series lying strictly above the low traffic series.

And

The current study provides clear evidence that elevated BLLs in children proximate to airports is at least partly attributable to avgas [aviation gas] [lead] deposition from piston-engine aircraft.

For more information and much greater detail, see the 2017 Zahran et al. study, which had as one of its primary objectives to estimate the economic costs to society, associated with lead exposures to children from piston-engine aircraft activity. The 2013 reference cited in the above italicized paragraph is: Zahran, S., M. A. S. Laidlaw, S. P. McElmurry, G. M. Filippelli, and M. Taylor. 2013. Linking source and effect: Resuspended soil lead, air lead, and children's blood lead levels in Detroit, Michigan. *Environmental Science and Technology* 47 (6): 2839–45.

[Italics: Pause for a moment to consider what Zahran et al (2017) determined. The data span nearly 10 years. The data indicate that at a group of Michigan airports, including Traverse City Cherry Capitol Airport, blood lead levels of living, breathing children who live in close proximity to these airports are elevated such with the elevation at least partly attributable to piston-engine aircraft activity. This is evidence for real lasting probable injury to a multitude of children. It would certainly appear likely that such children, including children in near-airport Traverse City neighborhoods are involuntarily serving, and have involuntarily served, as lead monitors, by agency of their own flesh, blood and bone, appointed to do so, without notification, without informed consent and without an opportunity to decline, by the FAA and NMC.]

Note that Zahran et al. (2017) did not have a chance to consider the especially insidious piston-engine aircraft lead-related impacts associated specifically with flight schools. Had they, we might expect to see

even higher blood lead levels in children beneath or along tracks offset (due to prevailing winds) from flight school preferred touch-and-go flight paths / patterns.

[See original attachment for graphs]

The above illustration is from: The Effect of Leaded Aviation Gasoline on Blood Lead in Children (2017), by S. Zahran et al., JAERE vol. 6 no. 2, pp. 575-610.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0008

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Consider a second recent study, Leaded Aviation Gasoline Exposure Risk at Reid- Hillview Airport in Santa Clara County, California, prepared by the Mountain Data Group and issued August 3, 2021. (Reid-Hillview Airport has airport identification code RHV.) In the RHV study, the following is reported (see: <https://news.sccgov.org/newsroom/reid-hillview-airport-airborne-lead-study>):

[Italics: Controlling for other known sources of lead exposure both explicitly and indirectly, demographic characteristics, and neighborhood conditions, the evidence from main analyses (in Section 4) of a statistical link between aviation gasoline exposure risk and child blood lead levels [BLLs] includes:]

1. As evidenced in Section 4.2, the BLLs of sampled children increase significantly and dose-responsively with proximity to Reid-Hillview Airport. As shown in Table 4, this relationship between child BLLs and distance to Reid- Hillview Airport is robust to various linear and nonlinear transformations of both input and response variables. Children residing within 0.5 miles of Reid-Hillview Airport present with significantly higher BLLs than children more distant of Reid-Hillview Airport.
2. As evidenced in Section 4.3, BLLs are significantly and substantively higher among sampled children residing East (and predominantly downwind) of Reid- Hillview Airport, and significantly increase in the estimated downwind days drifting in the residential direction of a sampled child from the date of blood draw.
3. As evidenced in Section 4.4, the BLLs of sampled children increase significantly with the volume of measured piston-engine aircraft traffic at Reid- Hillview Airport from the date of blood draw. Moreover, the BLLs of sampled children increase significantly with monthly quantities of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport from the date blood draw.

The RHV study revealed that that blood lead levels in children living near this airport were equal to or higher than those detected in children exposed to lead during the Flint Water Crisis.

Results from the above RHV study have recently been published as a peer-reviewed research paper in the Proceedings of the National Academy of Sciences Nexus as: Leaded aviation gasoline exposure risk and child blood lead levels, by S. Zahran, C. Keyes, and B. Lanphear, 2023, PNAS Nexus, Volume 2, Issue 1, March 2023, pages 1-11; <https://academic.oup.com/pnasnexus/article/2/1/pgac285/6979725?login=false>.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0009

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Consider a 3rd set of recent studies. The first is a March 18, 2022, air quality modeling (EPA AERMOD Software) study by Trinity Consultants of a similar aviation setting for the Middleton, WI, area, entitled Screening Level Assessment of Ambient Lead Concentrations Around the Middleton Wisconsin Municipal Airport – Morey Field (C29). Access this study at:

<https://middleton.civicweb.net/document/43209/>.

This Town of Middleton-funded study yielded estimates, based on the widely-accepted and widely-used EPA air quality modeling software AERMOD, of the maximum monthly ambient air quality lead concentrations (mass per unit volume) at ground level associated solely with piston-engine aircraft operations at the airport.

A companion Town of Middleton-funded study by Trinity Consultants, 9/15/22 Field Air Sampler Report entitled Measurement of Ambient Lead Concentrations Around the Middleton Wisconsin Municipal Airport – Morey Field (C29), is available at the following link:

<https://middleton.civicweb.net/document/43210/>. This report’s results demonstrated and documented a good agreement between the AERMOD simulation results and actual ground level ambient air lead concentrations measured in the field.

[See original attachment for “Figure 4-1 Mac Monthly Impacts”]

Source: Screening Level Assessment of Ambient Lead Concentrations Around the Middleton Wisconsin Municipal Airport – Morey Field (C29). See the above full citation and URL. The numbered locations are key sensitive receptor locations, such as schools, playgrounds, parks. These simulations have been validated by field air sampling for lead in the area shown. The color ramp indicates ambient air lead concentrations in micrograms per cubic meter. The two town of Middleton-funded Trinity studies link to the various blood lead level studies by Zahran and his colleagues. Collectively, these studies allow us to connect the dots between piston-engine aircraft lead particulate emissions, the associated lead exposures, near-airport children’s blood lead levels and the resulting lead poisoning of children.

The Town of Middleton funded one additional study, recently wrapped up in draft form by the USGS, that is highly relevant. The USGS study looked at overall lead concentrations together with its isotopic ratios in six residential water supply wells near the Morey airport. The isotopic ratios for lead found in the groundwater of the residential water supply wells closely matches the lead isotopic ratio for lead in the 100LL fuel used at the Morey airport. See:

<https://middleton.civicweb.net/document/43287/USGS%20Morey%20Airport%20Presentation.pdf?handle=EE1CD4B374AA4FF994DB01E2B17CAB3D>

[Underlined: A key implication is that aviation-related lead particulate emissions can poison via ingestion for children and others who may rely on groundwater sources under the influence of near-airport surface waters. Some of these individuals may be vulnerable to exposure both from inhalation and ingestion.]

Comment Number: EPA-HQ-OAR-2022-0389-0222-0002

Commenter Type: Private Citizen

Commenter: Dorinne Tye

Organization:

Excerpt Text:

In doing a quick review on the origins of the Environmental Protection Agency, I see sixty years ago there was public outcry leading to the beginning of the EPA fifty years ago. It would seem when EPA formed there were large, devastating and visible adverse environmental impacts stemming from fossil fuel pollution and the synergistic effects of these combined with insecticides and herbicides. Over half of EPA’s initial goals were to address lead and fossil fuels. Within years, all other forms of leaded fuel was

banned, except aircraft fuel. Fifty years later, this poison continues and remains greatly concentrated over US citizens and soils. These toxins should not be allowed to persist under your watch.

I live in the Pacific Northwest, thus my jaw drops at the irony of EPA's foot dragging regarding aviation environmental harms amidst wildfires, droughts and public outcry about the massive amounts of airborne leaded toxin millions are exposed to sixty years later, distributed via increasing exempted lead polluting aircraft. With pollutions teetering near record highs, extinction rates on par with dinosaur die off and hugely increased wildlife labeling of critical concern, increasing violence, human life expectancy reductions, mental illness crisis, murder being the leading cause of deaths in children and megafires, there is no justification for further delay. Here we are, again, telling the EPA we are suffering and begging you to protect us from this known airborne neurotoxin believed to be connected to the fall of Rome and banned in all other fuels which resulted in a steady reduction of violent crime. It's unacceptable for the EPA to continue to permitting seeming poisoning of the masses.

EPA was established to PREVENT this very thing, not be the roadblock. There are innumerable studies by far more qualified people than myself, most of which have been directed to you. I've read studies which demonstrate:

- Piston engine airport nearby residents, namely children have dangerously elevated BLL.
- Near angle residents BLL's are higher.
- Jets and wind spread particulates 5, 7 and 10 miles.
- Cool weather creates an inversion trapping and increasing pollutant and violence.
- And in cool weather pollution related crime increases

Many states and medical professionals have not included piston engine airport and flight training proximity in lead exposure screenings, nor did they reduce flag level of lead per CDC & WHO suggestions, indicating exposures have not been adequately and proactively identified or prevented.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0014
Commenter Type: Advocacy Organization
Commenter:
Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

Avgas is the single largest source of U.S. lead air pollution and, according to 2017 figures, accounted for 70 percent of U.S. lead air pollution. [Footnote 47: Supra at 3 & n.15.] Multiple studies confirm the link between general aviation airports and elevated blood lead levels in children living and attending school nearby.[Footnote 48: Supra section II.] The second inquiry of the endangerment finding test is thus also easily satisfied.[Footnote 49: See Am. Lung Ass'n v. EPA, 985 F.3d 914, 977 (D.C. Cir. 2021) (upholding EPA finding, under more stringent "significant contribution" framework, that source of one-third of U.S. greenhouse gas emissions was a "significant contributor to air pollution by any measure"), rev'd on other grounds sub nom. West Virginia v. EPA, 142 S. Ct. 2587 (2022).]

Comment Number: EPA-HQ-OAR-2022-0389-0223-0006
Commenter Type: Advocacy Organization
Commenter:
Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

General aviation airports expose nearby communities to lead air pollution

The human health risks associated with lead exposure, detailed above, are precisely why the federal government decades ago phased out and ultimately banned the use of leaded fuel in motor vehicles. [Footnote 13: See 75 Fed. Reg. at 22,446.] Thanks to that action and other steps taken by EPA to reduce sources of lead emissions, lead air concentrations have dropped dramatically. [Footnote 14: See id.] Yet piston-engine aircraft continue to emit almost 500 tons of lead each year, representing “the only remaining lead-containing transportation fuel” and the single largest source of U.S. lead air pollution. [Footnote 15: 87 Fed. Reg. at 62,761 (noting that piston-engine aircraft accounted for 70 percent of total U.S. lead air emissions in 2017); Aviation Gasoline, FAA, <https://www.faa.gov/about/initiatives/avgas/>; President’s Task Force on Environmental Health Risks and Safety Risks to Children, Federal Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts 10 (2018), https://www.epa.gov/sites/default/files/2018-12/documents/fedactionplan_lead_final.pdf.]

The persistent and widespread use of avgas impacts millions of people living near general aviation airports across the United States. A peer-reviewed study published in March 2023 confirms that link. [Footnote 16: Sammy Zahran et al., *Leaded Aviation Gasoline Exposure Risk and Child Blood Lead Levels*, 2 PNAS Nexus 1, 2, 5-6 (2023), <https://academic.oup.com/pnasnexus/article/2/1/pgac285/6979725>] It found that the Reid-Hillview Airport, located in East San José, California, is associated with elevated blood lead levels in children living within a 1.5-mile radius of the airport, independent of other lead exposure pathways, and that children living within a half-mile radius of the airport and children living East of the airport (downwind) are particularly at risk. [Footnote 17: Id. at 3, 5.] The study also found that, all else held equal, an increase from the minimum to maximum exposure of piston-engine airplane traffic is associated with an estimated 0.92 [micrograms]g/dL increase in blood lead levels in children living within half a mile of the airport, as compared to similarly situated children living farther (0.5 to 1.5 miles) from the airport, who experienced an increase of about 0.16 [micrograms]g/dL. [Footnote 18: Id. at 4.] For comparison, children living in Flint, Michigan experienced a 0.35-0.45 [micrograms]g/dL increase in blood lead levels at the height of the drinking water crisis there. [Footnote 19: Specifically, researchers found that “the switch in water source in Flint caused child [blood lead levels] to increase by about 0.35 to 0.45 [micrograms]g/dL from a precrisis baseline of about 2.3 [micrograms]g/dL.” Id. at 3 (citing Sammy Zahran et al., *Four Phases of the Flint Water Crisis: Evidence from Blood Lead Levels in Children*, 157 *Env’t Rsch.* 160 (2017)).]

The Reid-Hillview case study builds on earlier analyses making similar findings. A 2011 study on 66 airports in North Carolina found a strong correlation between child blood lead levels and airport proximity. [Footnote 20: Miranda et al., *supra* n.5, at 1513.] And a 2017 study on 448 airports in Michigan found that child blood lead levels increased dose-responsively in proximity to airports, declined among children sampled during a downturn in piston-engine aircraft traffic, and increased dose-responsively in the flow of piston-engine aircraft traffic across a subset of airports.[Footnote 21: *The Effect of Leaded Aviation Gasoline on Blood Lead in Children*, *supra* n.6, at 579.] We are not aware of any study contradicting the conclusion that, for children living near general aviation airports, piston-engine aircraft traffic is correlated with an increase in blood lead levels.

According to EPA, 4 million people reside—and about 600 K-12 schools are located—within 500 meters of airport runways used by piston engine aircraft. [Footnote 22: *Leaded Aviation Gasoline Exposure Risk and Child Blood Lead Levels*, *supra* n.16, at 1-2 (citing EPA data).] The exposure of these communities to daily, uncontrolled sources of lead contamination is unacceptable. EPA must act, and must do so quickly.

Comment Number: EPA-HQ-OAR-2022-0389-0224-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: New Jersey Progressive Equitable Energy Coalition (NJPEEC)

Excerpt Text:

In addition to having a disproportionate impact on OBCs in New Jersey and Environmental Justice Communities around the U.S., lead poisoning has severe impacts on children—especially children in OBCs. On July 28, 2022, the Subcommittee on Environment of the Committee on Oversight and Reform within the U.S. House of Representatives (the “Committee”) held a session titled “Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children.” [Footnote 12: See Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children, U.S. House of Representatives Transcript (July 28, 2022), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf>.] In the opening statement, the Chair of the Committee stated that “lead from the exhaust fumes of private planes or flight schools near [children’s] homes . . . [d]amages every organ and slowly severs neural connections,” leading to “seizures, learning disabilities, and low IQ.” [Footnote 13: *Id.* at 2.] The Chair added that “[l]ead exposure can predict differences in a child’s future income, health, and educational attainment.” [Footnote 14: *Id.*] However, not all people and communities experience the same amount of lead exposure—systemic environmental racism has caused more widespread impacts of lead pollution on families and children in OBCs and Environmental Justice Communities.

In 2020, the Centers for Disease Control and Prevention (“CDC”) found that most of the 2.6 million U.S. families at risk of lead poisoning are Black families. [Footnote 15: Eleesha Lockett, How Lead Poisoning Disproportionately Affects Black Communities, healthline (Feb. 7, 2022) <https://www.healthline.com/health/lead-poisoning-black-communities>.] The disproportionate impact of lead pollution on Black families and Environmental Justice Communities is fueled by institutionalized redlining [Footnote 16: *Id.* (“With the creation of (the Federal Housing Administration’s ‘Underwriting Handbook’) rating system for neighborhoods came the term ‘redlining,’ in which mortgage appraisers sectioned off the ‘least desirable’ neighborhoods on the map with a red line. In turn, lenders would not approve mortgages in these ‘red’ areas — thus creating a disparity that led to the rapid decline of inner city neighborhoods. As a result of this form of institutionalized racism, thousands of Black communities around the United States became disproportionately affected by the negative impact of environmental racism.”).] and environmental racism, which includes the disproportionate placement of polluting facilities in OBCs. [Footnote 17: *Id.* (“As a result of institutionalized environmental racism, communities in ‘undesirable’ neighborhoods are often exposed to environmental pollutants from places such as: [highways, landfills, waste sites, and even chemical plants]. In addition, many of the houses within these neighborhoods end ”).] The CDC also notes that children are commonly exposed to lead from paint chips, dust, soils, medications, cosmetics, consumer products, and parents who may bring lead home from working in certain industries. [Footnote 18: *Id.*] As a result of the overexposure Black children have to lead, the CDC determined in a 2013 report that Black children had the highest average blood lead levels at 5.6 micrograms per deciliter, which is over twice the level reported for white children—2.4 micrograms per deciliter. [Footnote 19: *Id.*] The 2013 study also found that “children with a blood lead level of 5 micrograms per deciliter [] or higher were at [*Italics: risk of serious adverse health effects.*”] [Footnote 20: *Id.* (emphasis added).] One of the many opportunities that EPA has to promote environmental justice is to regulate lead air emissions, prioritize reductions of lead air emissions in OBCs, and increase monitoring of air emissions to ensure that the most impacted communities are protected from the severe and highly consequential impacts of childhood lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0225-0001

Commenter Type: Private Citizen

Commenter: Tracy and Anthony Williams

Organization:

Excerpt Text:

Thank you for the opportunity to comment on the Proposed Finding. It has well been documented that children living within 500 miles of an airport at which planes use leaded avgas have higher blood lead levels than other children. We would also like to state that rural communities who are located away from airports are impacted by General Aviation as well. As such, this is greatly in our case. This includes a flight school performing daily flight maneuver exercises in our community for several years now. It is also important that minority communities who are impacted by General Aviation be considered as well. There is sufficient evidence to support that Lead is harmful to our health. Even small exposure of Lead from General Aviation is detrimental to the health and welfare of many communities (especially children and pregnant women). We also would like to submit supporting evidence in the attachment document below. Thank you, Tracy & Anthony Williams

Comment Number: EPA-HQ-OAR-2022-0389-0228-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

[Underline: One study] found that children who lived within six-tenths of a mile from an airport had blood lead levels that were 5.7 percent higher than blood lead levels of children who lived more than 2.5 miles from airports. Using these data, the [Underline: 10 Policies to Prevent and Respond to Childhood Lead Exposure] report released by the Health Impact Project in 2017 found that removing lead from aviation gas would protect 226,000 children born in 2018 and provide at least \$262 million in positive benefits.

The nation acted to ban lead in residential paint in 1978, most lead additives from gasoline in motor vehicles in 1986, and lead service lines in 1986. While these actions mean that we have made great progress in lowering blood lead levels in this country over the past several decades, the toxic legacy of lead lives on in our homes and environment and the continued use of leaded gasoline in piston-engine aircraft contributes to this problem.

Comment Number: EPA-HQ-OAR-2022-0389-0229-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: 7 Directions of Service, The Alaska Center, et al.

Excerpt Text:

The undersigned 87 organizations and 93 individuals submit this letter in support of EPA’s proposed finding that lead emissions from aircraft engines that operate on leaded fuel (“leaded avgas”) cause or contribute to lead air pollution, which may reasonably be anticipated to endanger the public health and welfare (the “Proposed Endangerment Finding”). EPA’s long- overdue Proposed Endangerment Finding recognizes what decades of scientific research have made clear: Lead emissions from aircraft that use leaded avgas endanger the public health and welfare. EPA must promptly finalize its endangerment finding and quickly move to regulate the largest remaining source of lead air emissions.

Emissions from the use of leaded avgas put millions of people in harm’s way. Lead emissions from the approximately 167,000 piston-engine aircraft that still use leaded avgas account for the most significant source of lead released into the atmosphere. And EPA estimates that there are over five million people across the United States—including more than 360,000 children aged five or younger—living very close to at least one airport where these aircrafts operate. Over 160,000 children attend schools near these

airports. Research shows that children living near airports where these aircraft operate have higher levels of lead in their blood than similarly situated children who live further away.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Efforts related to the lead issue intensified after a 2021 lead study commissioned by Santa Clara County showed that children living close to the airport experienced higher blood lead levels.

Comment Number: EPA-HQ-OAR-2022-0389-0231-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

Over 5 million people, including over 360,000 children [Footnote 11: <http://nepis.epa.gov/Exe/ZyPDF.cgi/P100YG4A.PDF?Dockey=P100YG4A.PDF>] under the age of 5, live near at least one airport where these aircraft fly.

Multiple studies [Footnote 12: <https://news.sccgov.org/news-release/study-commissioned-county-santa-clara-finds-increased-lead-levels-children-living-near>] have shown that children who live near these airports have higher levels of lead in their blood and most high lead emission airports are in communities of color.

Lead poisoning disproportionately affects communities of color [Footnote 13: <https://www.healthline.com/health/lead-poisoning-black-communities>], with black children having the highest concentration of lead in their blood. Lead in aviation fuel is an environmental, racial and social justice issue.

Comment Number: EPA-HQ-OAR-2022-0389-0234-0006

Commenter Type: Professional Association

Commenter:

Organization: National Association of Clean Air Agencies (NACAA)

Excerpt Text:

EPA must also consider the disproportionate impact of lead emissions on environmental justice communities across the country. EPA discusses in the proposal the importance of considering the environmental justice implications of lead emissions from covered aircraft. Not only do “blood lead levels in children from low-income households remain higher than those in children from higher income households, and the most exposed Black children still have higher blood lead levels than the most exposed non-Hispanic White children,”[Footnote 9: Supra note 1 at 62,767.] there is “a greater prevalence of people of color and of low- income populations within 500 meters or one kilometer of some airports compared with people living more distant.”[Footnote 10: Ibid, 62,756]

For all of these reasons and more, as detailed in the proposal, NACAA supports EPA’s proposed endangerment finding for lead emissions from aircraft that operate on leaded fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0018

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

In a recent published study of Reid-Hillview Airport in East San José, a community in Santa Clara County, California,[Footnote 61: Ex. C, Zahran et al., Leaded Aviation Gasoline Exposure Risk and Child Blood Lead Levels, 2 PNAS Nexus 1 (2022) [hereinafter “RHV Lead Study Publication”]. The full August 3, 2021 report by Mountain Data Group, Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California, was peer- reviewed by two external experts: Dr. Rebecca Anthopolos, an Assistant Professor in the Division of Biostatistics within the Department of Population Health at New York University Grossman School of Medicine, who has published on the risk of early childhood lead exposure in relation to aviation gasoline, and Dr. Mark Cullen, a retired professor of Medicine, Epidemiology, and Biomedical Data Sciences at Stanford University, where he served as the Founding Director of the Center for Population Health Sciences and as Senior Associate Dean for Research for the School of Medicine. See RHV Lead Exposure Report, supra note 21.] researchers found that children residing within a half-mile of the airport have higher blood lead levels compared to statistically similar children more distant from the airport.[Footnote 62: RHV Lead Study Publication, supra note 61, at 3 (finding that children within 0.5 miles of the airport have blood lead levels that are about 0.2 µg/dL higher than statistically similar children more distant from the airport); id. (reporting that “no matter the measurement of transformation . . . child BLLs decrease statistically significantly with residential distance from RHV”); see also RHV Lead Exposure Report, supra note 21, at 37.] The effects compound when accounting for intensity of aircraft traffic and wind patterns. For instance, an increase in piston-engine aircraft traffic from minimum levels to maximum levels caused blood lead levels of children proximate to RHV to increase by 0.92 µg/dL in children living within a half-mile of the airport – more than double the increase in blood lead levels at the peak of the Flint Water Crisis.[Footnote 63: RHV Lead Study Publication, supra note 61, at 4; see also id. at 3 (reporting that “[a]t the height of the [Flint Water Crisis], child BLLs surged by an estimated 0.35 to 0.45 µg/dL over baseline levels”).] On the whole, children living downwind (east) of the airport were at the greatest risk, with blood lead levels that were, on average, 0.237 µg/dL higher than blood lead levels of sampled children living north of the airport.[Footnote 64: Id. at 3.] Indeed, children living downwind of the airport were, all else held equal, 2.18 times more likely than children residing upwind of the airport to have a blood lead level equal to or greater than 4.5 µg/dL – the threshold for action used by the California Department of Public Health in assessing elevated blood lead.[Footnote 65: Id. at 3, 5.] Even commuting toward Reid-Hillview Airport for school was found to put children at significant risk.[Footnote 66: RHV Lead Exposure Report, supra note 21, at xvii, 65-72 (finding that children who commute to school by traveling one mile towards Reid-Hillview Airport from their place of residence have predicted blood lead levels 0.65 µg/dL higher than children who commute one mile away from the airport).] Accounting only for impacts of elevated blood lead levels on IQ, these exposures translate to a net lifetime earnings loss of \$11-24.9 million for the cohort of children residing within 1.5 miles of the airport.[Footnote 67: Id. at xviii, 79.]

Moreover, the EPA cited multiple studies specifically linking lead emissions from piston- engine aircraft to severe health effects: two finding elevated blood lead levels in children residing or attending school in close proximity to general aviation airports,[Footnote 68: See Miranda et al., A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, Env’t Health Perspectives 1513 (2011); Zahran et al., supra note 42.] and one finding higher cardiovascular mortality rates in adults 65 and older living near single-runway airports in years with more piston-engine air traffic.[Footnote 69: See Klemick et al., Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina, Int’l J. of Env’t Rsch. and Pub. Health (2022).]

This harm is avoidable. Researchers also found that blood lead levels in children residing near Reid-Hillview Airport tracked the contraction in piston-engine aircraft activity during the period of heightened COVID-19 restrictions. During the period from February to July 2020 when piston-engine aircraft traffic declined by 34 to 44%, children residing near the airport presented with blood lead levels that were about 0.23 µg/dL lower than among children sampled outside this contraction window.[Footnote 70: RHV Lead Study Publication, supra note 61, at 4.] Eliminating lead from avgas would immediately remove a significant and ongoing source of lead exposures for this uniquely vulnerable subpopulation.[Footnote 71: See Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, 74 Fed. Reg. 66495, 66506 (“If vulnerable subpopulations are especially at risk, the [EPA] Administrator is entitled to take that point into account in deciding the question of endangerment.”).] Indeed, the authors of the published RHV lead study determined that the results “support[] the [EPA’s] conclusion that emissions from [piston-engine aircraft] traffic independently contribute to child [blood lead levels], potentially endangering the health and welfare of populations residing near over 21,000 general aviation airports that service avgas-consuming aircraft.”[Footnote 72: RHV Lead Study Publication, supra note 61, at 2.]

Evidence of the public health and welfare risks of lead air pollution were sufficient to merit regulation 50 years ago, when the EPA issued the first lead reduction standards for automobile fuel. Finding otherwise here – in the face of evidence directly linking leaded avgas to lead air pollution and elevated blood lead levels – would defy logic. With approximately 5.2 million people living within 500 meters of an airport runway, 363,000 of whom are children aged five and under,[Footnote 73: Endangerment Finding, 87 Fed. Reg. at 62768.] there can be no reasonable dispute that this harmful pollutant endangers public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0240-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

In August 2021, Santa Clara County (SCC) released the results of a 10-year study conducted in the surroundings of Reid Hillview airport in San Jose. The study concluded that children living closer to the airport had elevated blood lead levels correlating with the geographic location of the use of leaded aviation fuel from aircraft flying out of the Reid Hillview. These same blood lead levels that increase in children living downwind from Reid Hillview were similar to those seen during the Flint, Michigan water crisis. Driven by the concerns of members in the surrounding community, specifically the Cassell neighborhood, LUNA agreed to collaborate with SCC to provide information to families regarding lead exposure and resources provided by the county to prevent lead poisoning. Our collaboration with SCC began in late June of 2022, the first phase focused on hiring Promotores to door knock within a 1.5 mile radius of Reid Hillview Airport. This is the same radius the 10-year study used to demonstrate that the blood lead levels of children living closer to Reid Hillview Airport were significantly higher than those living further away. By October of 2022, the Promotores knocked on a total of 14,476 doors. From door knocking we collected contact information from 554 households who were interested in taking active steps to prevent lead pollution and keep their families safe.

On August 17th of 2022, LUNA and Santa Clara County hosted a community meeting where Dr. Bruce Lanphear, a co-author of the study, explained the damaging effects of lead in the development of children. During this presentation, our communities learned that no amount of blood lead level is safe, and it is clear that leaded aviation fuel poses a health hazard for everyone.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0004

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

According to the EPA, approximately 5.2 million people live within 500 meters of an airport runway, 363,000 of whom are children ages five and under.[Footnote 3: Environmental Protection Agency. (2022). Technical Support Document (TSD) for the EPA’s Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare.

<https://www.epa.gov/system/files/documents/2022-10/420r22025.pdf>] Numerous airport lead studies have found that children living in proximity to airports have elevated levels of lead in their blood.[Footnote 4: Zahran et. al., 2017. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. Journal of the Association of Environmental and Resource Economists. 4(2):575-610.][Footnote 5: Miranda et. al., 2011. A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels. Environmental Health Perspectives. 119:1513–1516.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

RHV Airport has been exposing surrounding communities of color to lead for over 80 years. In 2021, a study commissioned by Santa Clara County found alarmingly high blood lead levels among children living near RHV, even higher than those detected at the peak of the Flint Water Crisis.[Footnote 8: <https://news.sccgov.org/news-release/study-commissioned-county-santa-clara-finds-increased-lead-levels-children-living-near>] Proximity to the airport was also associated with higher blood lead levels, with those living within a half-mile of the airport having the highest blood lead levels.[Footnote 9: Id.] A 2022 EPA report confirmed RHV Airport was the 34th highest lead-emitting airport in the U.S. out of 19,622.[Footnote 10: Do You Live Close Enough to a Small U.S. Airport To Have Lead Exposure? Check Our Maps | Pulitzer Center]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0010

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

A recent study commissioned by Santa Clara County revealed a statistical link between children’s blood lead levels and proximity to the Reid-Hillview Airport, residential angle (upwind or downwind) to the airport, and piston-engine aircraft traffic volume.[Footnote 34: Mountain Data Group (2021), Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California, <https://news.sccgov.org/sites/g/files/exjcpb956/files/documents/RHV-Airborne-Lead-Study-Report.pdf>.] The study found that blood lead levels were significantly higher for children living closer to Reid-Hillview instead of farther away, living downwind from the airport instead of upwind, and attending school near the airport instead of farther away.[Footnote 35: Id. at 32 (Table 2), 82-83.] Indeed, “[u]nder periods of high piston-engine aircraft traffic, children proximate to Reid-Hillview Airport experience an

increase in [blood lead levels] [in] excess of what the children of Flint experienced during the [Flint water crisis].”[Footnote 36: Id. at xviii.]

Researchers also observed that children’s blood lead levels “increase[d] significantly” as piston-engine airplane traffic increased and noted a significant decline in blood lead levels during the pandemic when air traffic dropped off.[Footnote 37: Id. at 83-84.] Thus, no matter where these avgas-polluting airports are located in California, they are an immediate and ongoing public health harm to communities.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0015

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Lead air emissions from airport operations can also contribute to and/or exacerbate existing childhood lead exposures in surrounding communities. For example, housing within 1.5 miles of several of the 18 highest emitting airport runways, including Republic and Buffalo-Niagara International airports, are more likely to be contaminated with leaded paint – a major source of childhood exposure to lead – than other locations in the counties in which they are located. Based on the most recent data, in the zip codes where the top 18 lead-emitting airports are located, health agencies documented 88 children below the age of 6 with elevated blood levels (above CDC blood lead reference level of 5 ug/dL).[Footnote 42: In 2012, the Centers for Disease Control and Prevention (CDC) introduced a blood lead “reference value” to identify children with higher levels of lead in their blood compared to most children. This level is based on the 97.5th percentile of the blood lead values among U.S. children ages 1-5 years from the National Health and Nutrition Examination Survey (NHANES) cycles. Children with blood lead levels at or above the blood lead reference value represent those at the top 2.5 percent with the highest blood lead levels. In 2012, the blood lead reference value for children corresponding to the 97.5 percentile was established to be 5 micrograms per deciliter (µg/dL) based NHANES data from 2007-2010. Prior to this current update, blood lead levels below 5 µg/dL may, or may not, have been reported to parents. The new lower blood lead reference value of 3.5 µg/dL means that more children could be identified as having lead exposure allowing parents, doctors, public health officials, and communities to act earlier to reduce the child’s future exposure to lead. The value of 3.5 µg/dL was derived from NHANES data from the 2015-2016 and 2017-2018 cycles. National Center for Environmental Health, Division of Environmental Health Science and Practice (2022), Blood Lead Reference Value, <https://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm>]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0026

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

A study that examined the relationship between lead pollution from avgas and children’s blood lead levels observed that high blood lead levels were associated with residing in low-income or segregated communities.[Footnote 57: Miranda, M. et al. (2011), A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels, Environmental Health Perspectives 119:1513-1519 at 1515, [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3230438/.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3230438/)]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0027

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Residents of color in low-income and/or segregated communities are particularly susceptible to harmful effects from lead exposure because they are already exposed to other sources of lead pollution exposure. For instance, a recent study concluded that racial identity, specifically identification as African American or Black, is the second strongest predictor for elevated blood lead levels.[Footnote 58: Yeter D. et al. (2020), Disparity in Risk Factor Severity for Early Childhood Blood Lead among Predominantly African-American Black Children: The 1999 to 2010 US NHANES, International Journal of Environmental Research and Public Health 17(5) at 19, <https://doi.org/10.3390/ijerph17051552>.] This research discerned that African American and Black children “are exposed to more [lead] and present with the highest average blood lead levels” owing to “the greater frequency and intensity of environmental [lead] exposure for young Black children.”[Footnote 59:] EPA’s 2020 analysis of populations residing or attending school near airports shows that low-income and non-white racial and ethnic groups are overrepresented in the neighborhoods closest to lead-emitting airports.[Footnote 60: EPA (2020), National Analysis of the Populations Residing Near or attending School Near U.S. Airports at 13-15] Delaying a final endangerment determination for lead avgas beyond 2023 will prolong these alarming public health and environmental injustices.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0004

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

EPA’s emissions modeling analysis identified several general aviation airports across the country that are in danger of exceeding the National Ambient Air Quality Standards (NAAQS) for lead and a handful are expected to surpass federal standards.[Footnote 14: See EPA (2020), Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports, at 59-60, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>] Exposure to lead pollution from leaded avgas can occur through multiple pathways, including inhalation of ambient airborne lead, dermal adsorption, and incidental ingestion.[Footnote 15: 75 Fed. Reg. 22,440, 22,460 (April 28, 2010).] EPA last estimated there were 16 million people (of whom 3 million are children) across the country who live or attend school within about a half-mile of a general aviation airport.[Footnote 16: Id.] A 2011 study tracking lead exposure from general aviation airports observed that people, especially children, living within a half-mile of an airport are exposed to elevated levels of this neurotoxic pollutant.[Footnote 17: Miranda, M. et al. (2011), A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels, Environmental Health Perspectives 119:1513-1519, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3230438/>; see also Zahran S. et al. (2017), The Effect of Leaded Aviation Gasoline on Blood Lead in Children, Journal of the Association of Environmental and Resource Economists. 2:575-610, <https://www.journals.uchicago.edu/doi/abs/10.1086/691686>.]

Comment Number: EPA-HQ-OAR-2022-0389-0259-0002

Commenter Type: Private Citizen

Commenter: Viney and Nelson

Organization:

Excerpt Text:

The verdict has been in for decades that lead is a developmental neurotoxin that is persistent in the human body and the environment, and is especially problematic for young children. Studies indicate that blood lead levels are greater for children who live near airports than those who live further away. For more information about two of the studies, see <https://sanjosespotlight.com/reid-hillview-airport-san-jose-lead-exposure-poisoning/> and <https://pubmed.ncbi.nlm.nih.gov/21749964/>.

The Environmental Protection Agency (EPA) states that there is no known safe level of exposure to lead. The situation is urgent and together, we must stop poisoning our children now.

Comment Number: EPA-HQ-OAR-2022-0389-0266-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics et al.

Excerpt Text:

[Attachment 11 – journal article titled “Individual- and Community-Level Factors Associated With Detectable and Elevated Blood Lead Levels in US Children Results From a National Clinical Laboratory”]

Comment Number: EPA-HQ-OAR-2022-0389-0267-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics et al.

Excerpt Text:

[Attachment 10 - article titled “Leaded aviation gasoline exposure risk and child blood lead levels”]

Comment Number: EPA-HQ-OAR-2022-0389-0268-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Petitioners support EPA’s Proposed Endangerment Finding and appreciate that EPA is finally moving forward to address this significant source of lead exposure. Lead emissions from the approximately 167,000 piston-engine aircraft that still use leaded avgas account for the most significant source of lead released in the United States’ atmosphere. EPA has known about the dangers of leaded gasoline since at least the 1970s, when it first acted to get leaded gasoline out of the country’s cars, and it has known for over a decade that any amount of lead in people’s bodies is linked to serious health effects. Research demonstrates that lead emitted by piston- engine aircraft using leaded avgas is linked to higher blood lead levels in children living near airports where these aircraft operate. The science is clear: Lead emissions from piston-engine aircraft endanger the public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0016

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

This is true even after accounting for other sources of lead exposure, indicating that the use of leaded avgas causes elevated blood lead levels in children. [Footnote 96: See Miranda et al. supra note 95, at 1,515 (finding relationship persisted even after accounting for individual- and group-level confounders, including the proportion of Black and Hispanic residents in a relevant census block, the percent of census-block population receiving public assistance, median household income of census block, and the season during which an individual child was screened for blood lead); Zahran et al, supra note 80, at 581 (controlling for confounding factors including housing stock age, location of industrial point sources emitting lead, percentage of households receiving public-assistance income, percentage of adult population with a high school education or greater, median home prices in a neighborhood, and population density).] Indeed, a recent study showed that living downwind of Reid-Hillview Airport in California was associated with childhood blood lead level increases comparable to those from the Flint water crisis and that children living within half a mile of the airport during periods of maximum piston-engine aircraft traffic had blood lead level increases nearly twice the amount that occurred during the Flint crisis. [Footnote 97: See RHV Lead Study at xv, xvi.]

This research is particularly troubling given that EPA’s own analysis estimates that there are more than five million people—including more than 360,000 children aged five or younger— living in very close proximity to at least one of the airports where piston-engine aircraft operate across the United States. [Footnote 98: In 2020, EPA estimated that over five million people live within 500 meters of a runway and fifty meters of a helipad. See EPA, EPA-420-R-20-001, National Analysis of the Populations Residing Near or Attending School Near U.S. Airports 13 (Feb. 2020), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100YG4A.PDF?Dockey=P100YG4A.PDF>. In 2010, EPA estimated that sixteen million people live within one kilometer of these airports. See 75 Fed. Reg. at 22,460.] More than 160,000 children attend schools near these airports. [Footnote 99: EPA, EPA-420-R-20-001, National Analysis of the Populations Residing Near or Attending School Near U.S. Airports 15 (Feb. 2020).] Millions of people are thus at risk for increased blood lead levels simply because of the location of their homes and schools.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-002-0001

Commenter Type: Advocacy Organization

Commenter: Mayra Pelagio

Organization: Latinos United for a New America

Excerpt Text:

I am here today to talk about the harm that lead aviation fuel has done to communities in East San Jose particularly around Reid-Hillview Airport. In August of last year, the board of supervisors in our county, Santa Clara County, were presented with a study that spanned for over 11 years taking blood lead level samples from children living within a one point five-mile radius of this airport. The results showed clear statistics with children living closer to the airport having higher levels of lead in their blood. This study and the statistics results irrefutably explain how damaging lead aviation fuel is to public health and I know this is not the only study that can prove to the EPA how damaging lead exposure is to children and adults alike. No level of lead is safe. In children it can cause severe development irregularities and in adults who have been exposed to lead for prolonged periods of time, it can -- they can develop severe health issues such as cardiovascular diseases.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-003-0001

Commenter Type: Private Citizen

Commenter: Migdalia Rodriguez-Cubides

Organization:

Excerpt Text:

Currently a large Hispanic population works in the Eastern section of San Jose, Santa Clara, California. And we find a community that is very concerned about the air pollution. This is also supported by a study that shows alarming figures and samples have been taken as part of a study. 17,241 samples were taken in children, and they show lead in blood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0001

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

I am here, my name is Christian Poulsen, I am representing the Duwamish River Community Coalition. In Seattle's Duwamish River Valley, the residential neighborhoods of Georgetown, South Park and Beacon Hill among others are all adjacent to King County International Airport, Boeing Field. The four residential zip codes there, within a few miles of the airstrips include several parks, community centers, schools that serve thousands of children under the age of seven years old. These neighborhoods are all members of Seattle's most diverse and lowest income areas and are all urban spaces densely populated with families, schools, libraries and playgrounds which raise significant environmental justice issues. Several recent studies have positively linked living near busy general aviation airports like KCIA to elevated blood lead levels which the EPA itself says can cause irreversible and lifelong health effects. Even low levels of lead in blood have been show to effect IQ, ability to pay attention and academic achievement.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0003

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

Studies of the effects of lead poisoning in children age zero to seven are numerous and frequently cited and studies of their dispersal and concentration of airborne lead pollution in relation to childhood BLLs, blood lead levels, are robust in sample size and becoming more numerous with renewed interest in lead as a pollutant. The relationship between proximity to airport and blood lead levels have determined that living within distances of up to over a mile consistently results in elevated blood lead levels in children and that prevailing winds, location of planes, preflight engine check called run up and traffic levels are all critical variables. There is consensus among the medical and scientific communities that levels detected in children living around general airports similar to KCIA are hazardous.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-006-0003

Commenter Type: Private Citizen

Commenter: Richard Offerman

Organization:

Excerpt Text:

Please understand what it means to know that a recently conducted health study found alarming elevated lead levels in school children living or attending school within a mile and a half of Reid-Hillview Airport in San Jose, California, and then realize that in January of this year, I found in our local Mount Diablo Unified School District by using their online attendance number there are an estimated 11,464 students attending preschool, elementary, middle and high schools within a mile and a half of the end of Buchanan's runways. Within this zone there are 13 preschools of which only two listed attendance numbers, 12 elementary schools, three middle schools and two high schools. There is also a large community college but I didn't add their number into this count. We all know that no lead is good for our children. Our families are at risk in their own backyards.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0003

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

The administration hired Dr. Sammy Zahran, a leading expert in this field who has published multiple studies on airborne lead. Dr. Zahran incorporated three main tests of exposure risk and was controlled for other sources of lead exposure. Among several main conclusions, it found that children living downwind from the airport had higher blood lead levels with increases of .40 micrograms per deciliter over children living upwind of the airport. For context, lead levels during the peak of the Flint water crisis were between .35 and .45 micrograms per deciliter over the baseline. In August 2021, Dr. Zahran's study was presented to the County Board of Supervisors. Given the urgency of Dr. Zahran's findings, our board unanimously and emphatically voted to stop selling AVGAS at our airport in January, the first airport in the nation system to do so, and I want to speak more about this point in just a moment. But first I am very pleased to report that a version of Dr. Zahran's study will soon be published in PNAS Nexus, a journal of the National Academy of the Sciences following peer review. The county looks forward to the inclusion of Dr. Zahran and Dr. Lanphear's published study in the Integrated Science Assessment to the evaluation of air quality standards for lead. All public agencies have a duty to our communities to protect their health and welfare. Elevated blood lead levels strongly correlate with lower IQ, underachievement, behavioral problems and adverse health outcomes the burden of which are carried by public agencies and society at large in the form of lost human potential. Indeed the study estimates a gain of \$11 to \$25 million in lifetime earnings for the cohort of children 18 and under who reside within one point five miles of our airport.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-012-0002

Commenter Type: Academia

Commenter: Bruce Lanphear

Organization: Simon Fraser University, on behalf of the County of Santa Clara

Excerpt Text:

The EPA estimated that over 450 tons of lead were emitted by piston aircraft annually, about 70 percent of all lead emissions. The EPA further estimated that 16 million Americans including three million children live within a kilometer of a general airport. Three studies have measured the contribution of leaded aviation fuel as a source of lead exposure for children. All three showed that airport emissions lead to an increase in lead poisoning among children. I want to share some of the results of the most recent one, the Reid-Hillview Airport study. In the Reid-Hillview study, Dr. Sammy Zahran and his team used

blood lead test of 17,000 children collected from 2011 to 2020 by the California Department of Public Health. Sammy's team did a masterful job showing that lead emissions increased children's blood lead concentrations, they found that children's blood lead increased with air traffic but only if the children live near the airport. They also found that children's blood level levels plummeted when air traffic contracted during the pandemic. Sammy and his team found that two percent of toddlers who live beyond a half a mile of the airport had a blood lead in excess of 3.5 micrograms per deciliter, in contrast over five percent of toddlers who live within a half mile of the airport had a blood level greater than 3.5 microgram per deciliter and over ten percent of toddlers who lived within a half mile of the airport and were downwind had a blood lead in excess of 3.5 micrograms per deciliter during heavy traffic. Scientists and public health agencies agree that no level of lead is safe for children. The population impact of lead exposure on brain development including IQ deficits, diminished academic abilities and ADHD are substantial and lifelong. Moreover, unlike some other risk factors that impact children's brain function, lead exposure is modifiable.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0005

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

As Deputy County Executive Gallegos explained, a peer reviewed study found that children living near the county's Reid-Hillview Airport experienced blood lead levels of the same magnitude suffered at the height of the Flint water crisis and even double that when piston-engine aircraft traffic was at its peak.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0003

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Today we have heard scientific experts and impacted community members, numerous scientific studies have shown increased blood lead level in children living nearby airports that use leaded aviation gas and we have heard from many today about the recent study showing the leaded aviation gasoline increase blood lead levels amongst thousands of children living near the Reid-Hillview Airport in Santa Clara County.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0004

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

In addition to the studies referenced by EPA in its proposal, a study released last summer by Dr. Zahran and Mountain Data Group which a few other commentors have already referenced found that the Reid-Hillview Airport in East San Jose, California is associated with elevated blood lead levels in children living nearby, independent of other lead exposure pathways, and that children living within a half mile radius of the airport and children living east of the airport, which is downwind, are particularly at risk. In fact, the study found that it's for children living within half a mile of the airport, an increase from the

minimum to maximum exposure of piston-engine airplane traffic is associated with an estimated .83 micrograms per deciliter increase in blood lead levels as compared to similarly situated children living farther from the airport, all else held equal. For comparison, children living in Flint, Michigan experienced an increase in blood lead levels about half that or .35 to .45 micrograms per deciliter at the height of the drinking water crisis there. It is my understanding that the Mountain Data Group Study has been accepted by the National Academy of Sciences and will be published soon. NRDC is not aware of any study contradicting the conclusion that piston-engine air traffic is correlated with an increase in the blood lead levels of children living near airports.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0003

Commenter Type: Advocacy Organization

Commenter: Gary Keller

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

You know what it really doesn't matter if a person breathes in, swallows or absorbs the lead particles, the health effects are the same, however, the body absorbs higher levels of lead when it is breathed in. So why are we here today? At the third try of an endangerment finding since 2006, because now we have the Reid-Hillview study, the very one that the GA industry never wanted to take place. Because similar to tactics by big tobacco and lead paint, when the polluting general aviation industry didn't like the Dr. Lynn Miranda in 2011 scientific study that first proved that children living near general aviation airports had elevated blood lead levels, they just went to a more favorable study. The Office of Transportation and Air Quality which is part of the EPA no less provided such a study published in 2013 which took lead air samples at 17 airports across the U.S. Unlike the Miranda study a number of these had plenty of lead emissions. It concluded that all 17 of these airports were safe as they eventually they all passed the national ambient air quality standard test. GA airports can now claim that there is lead at these airports but it is in such a very small safe quantity it doesn't matter. In essence the report justified their continued poisoning of children for the next eight years. That same report is looking a little weak right now, because Reid-Hillview was one of the 17 airports where air sampling took place. The parents of the children living around Reid-Hillview some of whom have spoken today now know that they are definitely not safe from those lead emissions. Other airports on that 17-airport list such as Centennial which every year is in the top two in the lead emitting airports in the world are now highly suspect. The Reid-Hillview study has now shown the glaring weakness of the national ambient air quality standard. The endangerment finding should be obvious. The problem is crystal clear but is also becoming crystal clear is the delay in stalling tactics that the aviation industry will employ in the replacing of the leaded fuel with unleaded. While they would like to stop the lead when the world runs out of fossil fuel others have worked more quickly.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0006

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

There is no safe level for lead exposure and while lead is dangerous to all, not everyone and not all children are equally exposed to lead, nor do they suffer the same consequences of exposure. General aviation airports with the highest lead emissions are in communities of color. As Dr. Sylvia Gallegos mentioned and many others, high elevated blood lead levels have been found at the airport that's found in Santa Clara county and those levels are on par with those detected during the peak of the Flint water crisis.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0003

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

As Dr. Lanphear mentioned, the Miranda and Zahran studies along with several others have consistently found that children who have regular contact with general aviation airports like the one in our community which is a hobby airport suffer some degree of lead poisoning from the use of leaded aviation gas at these airports. The Zahran study found elevated blood levels in some children whose only contact with the airport was driving past it twice a day going to and from school. There is no safe level of lead in a child and receiving a daily dusting of airborne lead from low flying airplanes most certainly endangers public health and welfare. The U.S. EPA Integrated Risk Information System has found it inappropriate to specify and accept a minimum safe level for airborne lead exposure because no threshold for lead toxicity has been established. The damage as Dr. Lanphear said and emphasized, especially in children, may occur at blood levels so low as to be essentially without a threshold. The CDC has noted that there is no safe level of lead exposure and the body absorbs higher levels of lead when it is inhaled. Once a small blood amount of lead is inhaled by a child with increased respiratory rate, it is too late to prevent potential health damage. There is no effective treatment to remove inhaled lead from a child's body and it will never go away. It will leave the blood stream and not be detected there for a few weeks but it will be stored in the body's organs and bones to accumulate over a lifetime. The only effective treatment for lead poisoning is not a treatment at all, it's the prevention of exposure in the first place.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0002

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

The lead from small aircraft can lead to high levels of lead in the blood of children living near the airports and research has shown that blood lead levels in children can be as high as those found in children in Flint, Michigan. Lead is extremely dangerous neurotoxin and no safe level of lead in blood. Airborne lead can be inhaled by people near airports either from direct aircraft emissions or interacting with contaminated soil or dust from earlier aircraft emissions. The EPA said 363,000 children age five and younger live within 500 meters of an airport runway and cited two studies that reported increased blood lead level in children with increasing proximity to airports. There is a potential for substantial implications for children's health according to the EPA regulatory filing.

Comment Number: EPA-HQ-OAR-2022_0389-0310-0002

Commenter Type: Private Citizen

Commenter: Peter Jones

Organization:

Excerpt Text:

Lead exposure during childhood can have devastating impacts on health. Lead exposure contributes to cancer and cardiovascular disease in adults. Over 5 million people, including more than 360,000 children

under the age of five, live near airports where piston-engine aircraft operate according to the EPA. [FL TEXT REMOVED] Every day communities across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0003

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

According to the EPA, over 5 million people, including 360,000+ children under 5, live near at least one airport where piston-engine aircraft operate. Children who live near airports have higher levels of lead in their blood, and [FL TEXT REMOVED] This is wrong.

Comment Number: EPA-HQ-OAR-2022_0389-0350-0001

Commenter Type: Private Citizen

Commenter: Scott Forrest

Organization:

Excerpt Text:

I live in a small town with a small airport, and I'm concerned about the lead that I'm breathing every day because of that, and I'm even more concerned about the children that live in my community and what lead is doing to them. It's way past time to ban lead in aviation fuel!

Comment Number: EPA-HQ-OAR-2022_0389-0352-0002

Commenter Type: Private Citizen

Commenter: Sharon Burke

Organization:

Excerpt Text:

Thankfully, I do not live near an airport or work at one, but many people do. You must protect them from this toxic substance. Children exposed to lead can suffer irreversible damage and adults can suffer from cancer and other diseases as well. Since many the people living near airports are low income or communities of color, I can only assume this is the reason our country has not dealt with lead-based aviation fuel before now. You must rectify this injustice.

Comment Number: EPA-HQ-OAR-2022_0389-0358-0002

Commenter Type: Private Citizen

Commenter: Lawrence Rosin

Organization:

Excerpt Text:

In addition, a few million people live near airports (which is where the fuel is used). That means they are usually exposed to high concentrations of lead. This includes children who are especially vulnerable and can develop problems such as mental illness and learning difficulties as results of damage to their central nervous system which is in turn a result of the exposure of lead. So please protect people from being exposed to the lead released by the use of aviation fuels.

Comment Number: EPA-HQ-OAR-2022_0389-0361-0001

Commenter Type: Private Citizen

Commenter: Emily Ecker

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0363-0001

Commenter Type: Private Citizen

Commenter: Gloria Richmond

Organization:

Excerpt Text:

[FL TEXT REMOVED] Lead in paint and other places was banned years ago as it is toxic to humans; especially young children. There are direct relationships to lowered ability to succeed in school due to lead poisoning which will affect these children for their lifetime. The airplanes that fly over their area are using 'leaded gasoline' and this must stop, now, there is no time to waste as it is a health issue that must be addressed. Make the commitment to using unleaded fuel immediately. The affects of leaded gas affects our entire country! [FL TEXT REMOVED] This is an important issue that simply can't wait. Thank you in advance for your assistance in changing the 170,000 piston-engine aircraft across the 20,000 airports. Don't forget that the families of these aviators are also at risk everytime they are in the air using leaded gasoline! Sincerely, Gloria Richmond Sincerely, Gloria Richmond Roseville, CA 95747

Comment Number: EPA-HQ-OAR-2022_0389-0373-0001

Commenter Type: Private Citizen

Commenter: Marina Atlas

Organization:

Excerpt Text:

[FL TEXT REMOVED] Lead is a potent neurotoxin with the most devastating effects observable in developing brains. The US EPA and States have known for years and advised women of reproductive age and families with young children that there is NO safe level of lead exposure. [FL TEXT REMOVED] These fine particulates further settle on surfaces from door handles to gardens and on soil thus multiplying the potential impacts of toxic lead pollution from air deposition. Furthermore, children not only breathe significantly more air per pound of body weight but are more likely to be exposed through hand to mouth behaviors as well as sometimes diet when foods cannot be grown free of toxic lead exposure. Banning avgas and closing this loophole cannot wait. [FL TEXT REMOVED] Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports and continues to poison everyone under flight paths. [FL TEXT REMOVED] Thank you for your consideration of this urgent matter and overdue problem. Sincerely, Marina Atlas Belmont, MA 02478

Comment Number: EPA-HQ-OAR-2022_0389-0374-0001

Commenter Type: Private Citizen

Commenter: Jackie Thiry

Organization:

Excerpt Text:

[FL TEXT REMOVED] Lead pollution is a serious issue for Wisconsin communities, especially those living near airports. Lead posed the most problems for children who are at risk of developing lifelong health issues from lead pollution. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0418-0001

Commenter Type: Private Citizen

Commenter: Sally Kaufman

Organization:

Excerpt Text:

As a pediatrician, I regularly screen my patients for lead poisoning due to the known adverse health effects of exposure to lead including damage to the brain and development, kidneys and hearing loss to name a few. Children can be exposed to lead in the soil and air and on average spend more time outdoors than adults. They are particularly susceptible as they have more skin and lung surface area per body weight than adults and their brains are still developing. It is essential we remove lead from aviation fuel to protect our children and pregnant women, in particular those living close to airports.

Comment Number: EPA-HQ-OAR-2022_0389-0473-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Piston-engine aircraft using leaded aviation gas are the largest remaining aggregate source of airborne lead pollution. There is no safe level of lead exposure in humans. Inhaling airborne lead from piston-engine aircraft emissions is one of the most dangerous ways to be exposed because it is absorbed so efficiently by the lungs and absorbed at nearly 100%. Airborne lead is particularly dangerous for children because children breathe at a faster rate than adults, and are therefore exposed to a greater dose than adults. There are many adverse health effects from lead exposure for both children and adults, which is cumulative, and can, for example, cause a permanent loss of IQ in children with developing brains.

Comment Number: EPA-HQ-OAR-2022_0389-0500-0002

Commenter Type: Private Citizen

Commenter: Carla Campbell

Organization:

Excerpt Text:

EPA proposed findings that GHG emissions from certain classes of engine used in aircraft contribute to the air pollution that causes climate change endangering public health and welfare under section 231 (a) of the Clean Air Act. I am very concerned about exposure to lead of communities living close to airports that have general aviation aircraft, especially of the children residing in these communities. As a pediatrician who treated many children with lead poisoning at The Children's Hospital of Philadelphia

and a professor of environmental health, I am quite aware of the many adverse effects of lead on the body, and particularly the risk for exposure of children and pregnant women.

Comment Number: EPA-HQ-OAR-2022_0389-0518-0001

Commenter Type: Private Citizen

Commenter: Theodore Weinreich

Organization:

Excerpt Text:

[FL TEXT REMOVED] p.s. Dear Secretary Michael Regan, It is no accident that [FL TEXT REMOVED] It is a vicious cycle: airports locate where there is cheap land, and neighborhoods inhabited by a population of lower income people that often include people of color, are also located where land is cheap. Children born in these neighborhoods are affected by lead poisoning which decreases mental capacity and health. These children grow to become adults with decreased cognitive abilities and earning potential, and so the cycle continues. I implore you to quickly adopt rules to eliminate "avgas" from being used in the United States, and take this vital step toward eliminating environmental discrimination in America. Sincerely, Theodore Weinreich Miami Beach, FL 33139

Comment Number: EPA-HQ-OAR-2022_0389-0521-0001

Commenter Type: Private Citizen

Commenter: Patrick McKee

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. There are children living near these airports. Just because someone can afford an airplane doesn't give them the right to poison these kids. It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure during childhood can result in devastating impacts on health, and [FL TEXT REMOVED] Leaded avgas presents a strikingly clear equity issue. [FL TEXT REMOVED] Sincerely, Patrick McKee Mercer Island, WA 98040

Comment Number: EPA-HQ-OAR-2022_0389-0533-0002

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

The EPA recently estimated that 16 million people live within 1 kilometer of the nearly 20,000 airport facilities in this county and that 3 million children attend school located within the same one kilometer radius." These numbers are from 2008. Avgas usage has only increased since then. While working around leaded avgas is a serious health risk, only a small bit of that risk is born by the beneficiaries of its use. With 95% of the lead emitted in exhaust, the greatest exposure is spread to all life on the ground, while the economic benefits accrue to the industry. The inequity is extreme.

Comment Number: EPA-HQ-OAR-2022_0389-0547-0002

Commenter Type: Private Citizen

Commenter: Don Lipmanson
Organization:

Excerpt Text:

Your agency has long been aware that Lead exposure is extremely dangerous to the health and mental development of children, and can cause cancer and cardiovascular problems in exposed adults. Millions of people live in the vicinity of an airport where private non-jet airplanes operate, especially lower income folks in urban areas like southern CA. It is ethically wrong for well-off private plane users to inflict such dangerous pollution upon the underprivileged.

Comment Number: EPA-HQ-OAR-2022_0389-0553-0001

Commenter Type: Private Citizen

Commenter: Marcia Van Eden

Organization:

Excerpt Text:

I live near a general aviation airport where there are five flight schools operating. As part of training, these planes practice take off and landings by flying a circle over the surrounding area and repeating. On average each plane is able to complete about 12 laps per hour, and there are commonly five or more planes doing laps for over twelve hours a day. With sixty laps an hour for several hours a day the lead emissions add up. In addition, there is an elementary school in my neighborhood these planes fly over. The exposure to lead these kids get day after day is frankly alarming. [FL TEXT REMOVED] Sincerely, Marcia Van Eden Louisville, CO 80027

Comment Number: EPA-HQ-OAR-2022_0389-0563-0001

Commenter Type: Private Citizen

Commenter: Kathryn McKenzie

Organization:

Excerpt Text:

I live in Superior, WI near a municipal airport with smaller plane flying in and out. I also live near a pipeline and with a mile of an oil refinery. Can't the government give me at least some respite and get rid of leaded gas for small planes? Elementary and Middle Schools are nearby. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0565-0001

Commenter Type: Private Citizen

Commenter: Jennifer Brooks

Organization:

Excerpt Text:

[FL TEXT REMOVED] In my neighborhood in Middleton, Wisconsin, recreational planes from Morey Airport fly overhead every day. They are often so low that you can read the letters and numbers on the planes. This is a neighborhood full of children, and we're worried about the lead that these planes are dropping on all of us.

Comment Number: EPA-HQ-OAR-2022_0389-0570-0001

Commenter Type: Private Citizen

Commenter: Gary Keyes
Organization:

Excerpt Text:

A number of residents here have been actively contacting anyone who will listen to our concerns about this airport. Aside from the increased noise from more traffic and the pilots ignoring reasonable altitudes the lead pollution is a huge concern. There are schools and large sports fields all within these patterns and the health and safety of everyone needs to be addressed. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0628-0002

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

I know this first hand as my child was impacted from living in a lead-polluted area. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease. 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0636-0001

Commenter Type: Private Citizen

Commenter: Cynthia Lawton-Singer

Organization:

Excerpt Text:

I have lived in several cities near airports, under the transit routes for plane departures and landings. The impact of emissions to the air was SEVERE! I was an adult, but I can't imagine raising or being a child in an area where they would be exposed to that truly AWFUL air!

Comment Number: EPA-HQ-OAR-2022_0389-0652-0001

Commenter Type: Private Citizen

Commenter: Chris Dicesare

Organization:

Excerpt Text:

We do not need more studies or data - we need action to protect children, our health, and our environment now. Lead is highly toxic and does not degrade. These harms have been known for hundreds of years. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems. Lead harms adult cardiovascular health. No level of lead exposure is safe. We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families.

Comment Number: EPA-HQ-OAR-2022_0389-0684-0002

Commenter Type: Professional Association

Commenter:

Organization: Pennsylvania Chapter of the American Academy of Pediatrics

Excerpt Text:

As an air pollutant, lead is particularly toxic to children, because children are more vulnerable to air pollution due to their unique physiology and higher exposure to pollutants by body weight compared to adults (reference PMID: 34001642). As pediatricians, we know that removing a significant environmental source of lead would greatly benefit the health of children, especially for those who live near airports or areas where aircraft emit lead from their engines. Both short-term and long-term exposure to lead in the environment can lead to damage to the developing brain and nervous system, delays in growth and development, and problems with learning and behavior. There is no safe level of lead so identifying a source such as air pollution, which a child cannot reasonably escape on their own, and removing it through regulation is imperative. We need to clean up our air for the betterment of children's health and their future.

Comment Number: EPA-HQ-OAR-2022_0389-0685-0001

Commenter Type: Private Citizen

Commenter: SK Vargas

Organization:

Excerpt Text:

To whom it may concern, I am writing this comment to implore you and beg for your help and support. Lead fuel and their emissions are going to destroy Long Island and borderline communities in Queens, NY. The NEXtGEN system provides for high volume landings which dump toxic emissions over our homes. Coincidentally, they land over the school I teach at. What I see there are a wide array of health concerns that have become increasingly serious as the frequency of planes/lead-carbon emissions increase. Many children in the community have processing issues, asthma, speech, and other neurodiverse conditions present. This doesn't require a study, a medical degree or special investigation. This just requires eyes and talking to the witnesses. So, it is logical that I would immediately become concerned when we uncovered that the new home we moved into is under the same landing pattern, only further east. I am worried because my husband, a lifelong athlete, fell ill with cancer. I'm worried that the noise and landings at 3 am will give me a heart attack one day. I'm worried that my 40-year-old neighbor who doesn't drink was diagnosed with a fatty liver. ALL of this has TONS of research to prove it. We need a priority transition to lead-free aviation fuel!! We need a recognition and information outreach to help people understand what's happened and what they should look for to fix. Please help us. Thank you for taking the time to read this.

Comment Number: EPA-HQ-OAR-2022_0389-0696-0003

Commenter Type: Private Citizen

Commenter: Mary Walker

Organization:

Excerpt Text:

In children, their growing bodies make lead exposure an increased hazard due to the larger absorption occurring. Their brains and nervous systems are more sensitive as well. "Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0699-0002

Commenter Type: Private Citizen

Commenter: Tony Romero

Organization:

Excerpt Text:

Blood lead levels in children from low-income households remain higher than those in children from higher income households. Blood-lead level increases in children living downwind from Reid Hillview were like those seen during the Flint, Michigan water crisis. We need the EPA to act now to protect our communities!

Comment Number: EPA-HQ-OAR-2022_0389-0700-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

Blood lead levels in children from low-income households remain higher than those in children from higher income households. Locally, a comprehensive study of 10 years of data confirmed that children living near Reid Hillview Airport were at elevated risk for harmful lead exposure. We need the EPA to act now to protect our communities!

Comment Number: EPA-HQ-OAR-2022_0389-0701-0001

Commenter Type: Private Citizen

Commenter: Cesar Navarro

Organization:

Excerpt Text:

I urge the EPA to protect our communities in East San Jose surrounding the Reid Hill View Airport and regulate the leaded fuels used in small piston aircraft by finalizing its findings that lead emissions from the aircraft used at this airport are a hazard to human health. I work within a 1.5 miles radius of this airport and as a result, I'm exposed to lead contamination on a daily basis. It is part of the EPA's Mission to protect human health from contamination, I urge you to protect my health and the health of children in this area, especially the children who go to school adjacent to the airport who are exposed every day in the classroom.

Comment Number: EPA-HQ-OAR-2022_0389-0706-0001

Commenter Type: Private Citizen

Commenter: Estefania Bautista

Organization:

Excerpt Text:

I urge the EPA to protect the most vulnerable communities and regulate leaded airplane fuel now. It is a health hazard to have airplanes fly above homes with lead raining on them. Over 5 million people live near a small airports where covered aircraft engines use leaded fuel operate. In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the

annual emissions of lead to air in that year. As someone who works in East San Jose (CA), these types of studies are ones that not only concern me due to being 1.5 miles away from the Reid Hillview Airport, but make me wonder what kind of future we will have if nothing is done. Locally, a comprehensive study of 10 years of data confirmed that children living near Reid Hillview Airport were at elevated risk for harmful lead exposure. They are either experiencing symptoms now or they may develop as they age. This is frightening! I urge the EPA to finalize its findings and take action to protect the most vulnerable and who have been marginalized due to their immigration status, their income level, and their racial background.

Comment Number: EPA-HQ-OAR-2022_0389-0724-0001

Commenter Type: Private Citizen

Commenter: Hannah MacLaren

Organization:

Excerpt Text:

As an educator working with LAUSD schools in the Santa Monica and VanNyes areas, both of which support piston-engine airplanes, I am all too aware of the health implications for the children created by the usage of leaded aviation gas in these airplanes.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0003

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

Studies have been done over and over again, providing chilling results of the lack of development of a child's brain, for those exposed, especially living near airports. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease. I am concerned for all these groups.

Comment Number: EPA-HQ-OAR-2022_0389-0751-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is a persistent, cumulative toxin that never goes away; it stays in the environment and is difficult or impossible to mitigate. There is no safe level of exposure, and lead exposure has been associated with a multitude of health problems. Yet, decades after it was banned in products and automobile fuel, private industry is still allowed to poison people living around airports. Children living near airports or attending school under a flight path may be afflicted with health issues for the rest of their lives. Pilots and others who need to service and clean the lead out of plane engines may not only expose themselves but also bring home lead on their clothing to their families and expose them. The Reid-Hillview study showed that children living near the airport had lead exposure blood levels at the same level- and sometimes exceeding- children exposed to lead in Flint, Michigan. This is a health EMERGENCY.

Comment Number: EPA-HQ-OAR-2022_0389-0755-0001

Commenter Type: Private Citizen

Commenter: D. Milton

Organization:

Excerpt Text:

Lead is highly toxic and does not degrade. The harms have been known for hundreds of years. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems Lead harms adult cardiovascular health. No level of lead exposure is safe. We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families. We do not need more studies or data - we need action to protect children, our health, and our environment now.

Comment Number: EPA-HQ-OAR-2022_0389-0759-0001

Commenter Type: Private Citizen

Commenter: Andrea Thompson

Organization:

Excerpt Text:

Our soil near airports is being saturated to the point it's unsafe to grow a garden the airlines and oil industry need to remediate all the soil surrounding area pollution and waterways contaminated! Even playing in the backyard put the children there at risk through skin and littler one that eat dirt or suck their tiny thumbs!

Comment Number: EPA-HQ-OAR-2022_0389-0765-0001

Commenter Type: Private Citizen

Commenter: Janet Jordan

Organization:

Excerpt Text:

I am writing to urge you to finalize a finding that leaded aviation gas is a danger to both children and adults. It should be banned immediately. A child's exposure to lead results in mental retardation, with more retardation for those who live closer to airports. If you have ever known a developmentally disabled, you know how heartbreaking it is. The child does not have the tools for the ordinary actions required for life as an adult. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease. It should not happen to anyone, yet it does happen to those within a 5-mile radius of an airport.

Comment Number: EPA-HQ-OAR-2022_0389-0769-0002

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

Since there truly is no safety issue for pilots and planes to use these new unleaded fuels, it is shameful that the FAA and AOPA are trying to bully and stop officials like those in Santa Clara who did the right

thing and banned this leaded fuel to protect the health and well being of residents and children near those two airports. The excuse that banning leaded fuel poses a safety risk does not hold water anymore. Banning this fuel now IS the right, smart, and safe thing to do and the number one mission for all the stakeholders in this issue should simply be to advocate and work for the production and orderly distribution of these unleaded fuels. The only known safety risk that has been proven for years is to all the innocent and vulnerable children who are being exposed these lead emissions and poisoned by them. History will always remember these people and organizations who literally tried to keep this unleaded fuel in the air and this health risk to children as long as they could, despite the fact that the unleaded fuels are available and pose no risk to pilots or planes. This is America. Children and adults who live and go to school near these airports deserve to breath air that doesn't have lead in it. I invite those who want to further delay bringing unleaded fuel to airports to come to my children's school and stand in front of it and watch how these low flying planes are dusting children with lead every 3 min or so.

Comment Number: EPA-HQ-OAR-2022-0389-0132-0001

Commenter Type: Private Citizen

Commenter: Kathryn Rifkin

Organization:

Excerpt Text:

I am furious that leaded gas is allowed at all. I live (for 42 years) directly under the approach to Hanscom AFB and raised my kids here - they both are on the autism spectrum.

Comment Number: EPA-HQ-OAR-2022-0389-0133-0001

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

Note addressed with respect to the members of EPA, I ask you to please help us with the request that the Hillview airport be regulated immediately so that it is totally prohibited, that Hillview airport stop using gasonine -containing led, Please do us justice and assert the civil rights that correspond to the children and youth of our community,stop polluting our air and that our children and youth their brains can develop normally like any child, youth of the United States since led has been discovered dangerously harmful especially in developing children affecting their brain in academic learning and damage to vital organs, so that they can grow up happily in their community, our family is very concerned since we have a child under 11 years old and on a daily basis we also worry about him and the rest of the children and young people who are thousands living near Hillview airport withing 1 ½ mile distance, airplanes constantly flying in our area with horrendous noises every day We are panicking about the danger that they fall into our homes and we are dangerously injured, since the pilots are students and not professional pilots and that factor makes them more dangerous for our community, for the pilots, flying in our community is a luxury and for us it is a necessity to live with dignity, the abuse of our children and young people is enough and the constant abuse toward our community must stop immediately , we ask for immediate justice and that the Hillview airport in San Jose be closed immediately, we urgently ask you to listen to us since our children and young people deserve they be helped, because we are human just like you are.

Comment Number: EPA-HQ-OAR-2022-0389-0137-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Please do everything you can to end leaded fuel at airports immediately. I live in Placerville and the government owned airport is using lead fuel which endangers a K-8 school and a large park within a half-mile of the airport. Our community made a website called <https://safeairportgas.com> to encourage our county to switch to unleaded now.

Comment Number: EPA-HQ-OAR-2022-0389-0138-0001

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

As stated in the Leaded Fuel Proposed Finding, extensive supply of leaded avgas in terms of annual volume poses significant risk to millions of people, especially those with daily encounters within 500 meters of an airport runway. [Bold: Children, and those of disadvantaged intersectionalities, are disproportionately affected by reliance on this energy source, and I fully support the Administrator’s proposition to finalize these findings for the purpose of proposing regulatory standards under Section 231 of the Clean Air Act.] This, in conjunction with the Federal Aviation Administration’s (FAA) EAGLE Initiative [Footnote 2: The Federal Aviation Administration. (2022). Programs & Initiatives: Aviation Gasoline. Available at: <https://www.faa.gov/about/initiatives/avgas>] to transition to lead-free avgas by 2030 and the FAA Reauthorization Act of 2018 [Footnote 3: FAA Reauthorization Act of 2018. (2018). Public Law 115-254—Oct 5, 2018. 115th Congress. Available at: <https://uscode.house.gov/statutes/pl/115/254.pdf>] to assess existing non-leaded fuel alternatives, are vital steps towards ensuring public health.

Comment Number: EPA-HQ-OAR-2022-0389-0141-0003

Commenter Type: Private Citizen

Commenter: Alan Levenson

Organization:

Excerpt Text:

Airports are often close to schools, pre-schools, homes and playgrounds. We know that lead is unsafe at any level and particularly harmful to the developing brains of children.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

According to the EPA, approximately 5.2 million people live within 500 meters of an airport runway, 363,000 of whom are children age five and under. The EPA also estimates that “573 schools attended by 163,000 children in kindergarten through twelfth grade are within 500 meters of an airport runway.” Millions more are at risk by virtue of living within 1000 to 1500 meters of airport runways. Others are subjected to multiple daily dustings of this toxin from repetitive flight training activity.

Comment Number: EPA-HQ-OAR-2022-0389-0151-0001

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

My name is Jasmine, Jimenez my family and I have lived for approximately 43 years within one mile from Reid Hillview we have a child under 11 years old living in our household and we were not aware the planes are being operating with led fuels, we are very concerned about the caused damage to our health, the lead had done to our family especially our children and community.

Children are particularly vulnerable to the effects of lead. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory, and behavior. There is no known safe level of lead in the body." Furthermore internal damage to their vital organs.

Every day, East San Jose residents, pregnant women, children and adults are being slowly poisoned by led particles from exhaust of private planes, continually flying in circles, fuel spills at the airport and gas fumes escaping during refilling ,additionally there are 9 schools located within the flight pattern used by pilots while fling in circles

Reid Hilview is exposing East San Jose children, youth and the whole community to the noise, irritation, lead pollution, and lower standard of living that results from led exposure and the eminent danger for a plane crashing into our living spaces. East San Jose children and adults are being physically and mentally harm on a daily basis by the incessant noise from Reid Hillview planes.

This county land should be used in a way that benefits a larger percentage of county residents, while not exploiting ,abusing the life for other county residents and ignoring civil rights for our children and disadvantaged community . The county airport system just a welfare for the rich.

[Bold: stop thinking in terms of what is convenient for a recreational pilot and start thinking in terms as to what is best for East San Jose, and Santa Clara County.

We asked to have Reid Hillview closed immediately we can not afford waiting another 8-10 years for Reid Hillview airport to be closed and exposing our community for further health damage, inspire our East San Jose children to be a first-rate school system.]

Comment Number: EPA-HQ-OAR-2022-0389-0151-0003

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

Note addressed with respect to the members of EPA, I ask you to please help us with the request that the Hillview airport be regulated immediately so that it is totally prohibited, that Reid Hillview airport stop using gasoline -containing lead, Please do us justice and assert the civil rights that correspond to the children and youth of our community, stop polluting our air and that our children and youth their brains can develop normally like any child, youth of the United States since lead has been discovered dangerously harmful especially in developing children affecting their brain in academic learning and damage to vital organs, so that they can grow up happily in their community, our family is very concerned since we have a child under 11 years old and on a daily basis we also worry about him and the rest of the children and young people who are thousands living near Hillview airport withing 1 ½ mile distance,

airplanes constantly flying in our area with horrendous noises every day We are panicking about the danger that they fall into our homes and we are dangerously injured, since the pilots are students and not professional pilots and that factor makes them more dangerous for our community, for the pilots, flying in our community is a luxury and for us it is a necessity to live with dignity, the abuse of our children and young people is enough and the constant abuse toward our community must stop immediately , we ask for immediate justice and that the Reid Hillview airport in San Jose be closed immediately, we urgently ask you to listen to us since our children and young people deserve they be helped, because we are human just like you are.

Comment Number: EPA-HQ-OAR-2022-0389-0155-0001

Commenter Type: Private Citizen

Commenter: Rachel Stanton

Organization:

Excerpt Text:

I live near 2 General Aviation airports in a suburban community. There are many children in the area who are being exposed to lead pollution due to the vast increase in aviation activity in the last 3 years. Particularly egregious are the pilot training schools who have drastically increased operations. Leaded fuel was banned in all other combustion engine vehicles because of its extreme hazards to human health. It is absolutely necessary for the EPA issue a finding consistent with that in the area of General Aviation. No amount of lead is safe.

Comment Number: EPA-HQ-OAR-2022-0389-0156-0001

Commenter Type: Private Citizen

Commenter: Carmen Sucharov

Organization:

Excerpt Text:

I live in Superior, CO. I am close to the RMMA. My house backs to the local school football field. This is a K-8 school. The planes circle above school grounds all the time. It is constant. There is hardly a break. Something needs to be done. This will have lasting impacts in these children's health. And the airport only keeps expanding with no regard for the health of the residents.

Comment Number: EPA-HQ-OAR-2022-0389-0167-0002

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

(2) The engines typically using leaded gas are small aircraft (single or twin engine). These aircraft are very common in the flight training industry, which relies on the cheap additive to lower gas cost while still maintaining octane requirements. However, these smaller aircraft are commonly located in smaller regional or local airports - ones that are usually closer or integrated with residential communities. This combination poses a unique threat to health given the proximity and use of lead in these aircraft. (see attached file of Superior, CO look at local training airport use and the low flyovers of residential neighborhoods). Of note here is that over 200,000 takeoff/landings occur at RMMA at present by airplanes using leaded fuel. These flight paths occur over a number of community schools and residential areas at heights of only 1000'. These are not-intermittent, but rather circular touch and go landings by

these flight schools. This places the majority of their operation within a narrow community resulting in a concentrated emission of leaded gas in this area (vice a longer distance flight that may travel many miles, thereby dispersing the effects of the emissions over a larger area). This poses an acute health threat that has an outsized risk on children in our local community.

Comment Number: EPA-HQ-OAR-2022-0389-0170-0001

Commenter Type: Private Citizen

Commenter: Gloria Lechuga

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

It's not fair that East San Jose kids in schools innocently play and don't know they're inhaling lead-contaminated air. According to the study done and called Risk of Exposure to Leaded Aviation Gasoline at the Reid-Hillview Airport in Santa Clara County, California, the saddest thing is that your IQ is affected over time. We have no right to enjoy our park. There are warnings that prohibit kite flying, because it affects the airspace of the planes, and at night we do not have peace when sleeping, thinking that at any moment these planes that transit until the wee hours of the night might fall. I call on the Environmental Protection Agency to take action to safeguard the public health of all Santa Clara County residents, especially children, and to eliminate leaded gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0172-0001

Commenter Type: Private Citizen

Commenter: Alfonso Mendez

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

When I was Neighborhood President of the Lanai and Cunningham Association, there was pollution in the air, and they said it was the paint and not the piston-powered airplanes. That's why the County was asked to go back to lead testing and find the sources that cause the problems for the youth because some couldn't walk. They performed the lead study in this sector, and it emerged that the piston-powered planes that use leaded gasoline are directly related to air pollution affecting the public health of all the inhabitants of this sector. We also have concerns because these planes are falling on houses near the airport. Yesterday, November 13, 2022, a small plane had an emergency landing. It is time to ask you to save the public health of all human beings, and especially young people and children, as lead affects the entire nervous system and bone system due to the use of leaded gasoline these piston-powered planes.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0005

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

20,000 so-called aviation [italics: facilities] in the United States provide 100LL Leaded Aviation Fuel AKA Avgas, over [bold: 16 million] people are within 1 kilometer of those facilities, this includes 3 million children. Over 600 schools are located within half a kilometer (500 meters or 1640 feet) of such

sites. This includes three Michigan Plymouth Township & Canton Township area Schools, two which are Plymouth Canton Community Schools (PCCS) all within hundreds of feet of both “Run Up” areas at Michigan Department of Transportation (MDOT) owned non-essential non-strategic Personal Hobby, Sport, Recreational Social Entertainment Venue Canton Plymouth Mettetal 1d2 airstrip (pdf) in Canton Township Michigan (MDOT) (MDOT) AKA the ”MDOT 1d2 Frat House”. NOTE: Impossible to ignore an Alarming 47% increase of Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) in Plymouth Canton Community School System (PCCS) students (html) 07-17-2019 | Hometown Life | USA Today | Gannett.

Comment Number: EPA-HQ-OAR-2022-0389-0199-0004

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

Because the same pipelines transport both avgas and unleaded mogas, there is a rule allowing up to 0.05 g lead per gallon of unleaded mogas (Cabrera, Yvette, 2017). Knowing the consequences of allowing lead additives in mogas, this allowance is unacceptable.

Conclusions: Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to EPA. In addition to polluting the atmosphere, the lead particles also contaminated the environment with what is known as “legacy lead”. The legacy of accumulated lead in community soils and their association with childhood exposure is a topic of my research throughout my career. Regulations allowing TEL in any gasoline must be eliminated to prevent future poisoning of people and additional contamination of the environment.

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Cabrera, Yvette, 2017. There's still lead in your unleaded gasoline (permitted 0.05g/gallon)—and it may be putting kids at risk. *Think Progress*.

Cabrera Yvette, 2021. Leaded gasoline is finally gone—but its toxic legacy lingers. *Grist*.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0003

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Banning leaded fuel will stop the brain damage, including loss of optimal IQ, that children who live close to airports are at risk of. We have a choice: Do we continue to allow the use of leaded fuel for aviation hobbyists and student pilots (many of which are from foreign countries including China), or do we start the process with the [*Italics: Endangerment Finding*] to prohibit the use of leaded fuels to protect the neurodevelopment of children? Banning leaded fuel, starting with the [*Italics: Proposed Endangerment Finding*], without further delay must be our priority so that the neurocognitive potential of all children is preserved.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0006

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Because the present NAAQS for lead does not protect children living near airports that use leaded fuel, the elimination of leaded fuel is our only hope that will protect those children. An [*Italics: Endangerment Finding for Leaded Aviation Fuel*] is long overdue.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0005

Commenter Type: Advocacy Organization

Commenter:**Organization:** National Center for Healthy Housing (NCHH)**Excerpt Text:**

It is critical that federal agencies, including EPA, take a holistic approach to protect children and communities from lead exposure. This approach must include regulating aviation gas, which accounts for 70 percent of lead emissions into the nation's air; approximately [Underline: 167,000 piston engine aircraft emit about 450 tons each year.] Lead particles from aviation gas contaminate air and settle in the environment, including in the soil. [Underline: EPA estimates] that over 5 million people, including 136,000 children, live or attend school within 500 meters of an airport runway. That is equivalent to roughly 6,476 elementary school classrooms full of children needlessly exposed to lead. Urban areas with larger amounts of traffic by piston-engine aircraft are especially at risk from this avenue of lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0241-0004**Commenter Type:** Local Government**Commenter:****Organization:** County of Los Angeles, CA, Board of Supervisors**Excerpt Text:**

The EPA estimated in 2020 that roughly 5.2 million people live in a census block intersecting with a 500-meter buffer around an airport runway or a 50-meter buffer around a heliport. Of those people, 363,000 are children aged 5 years and under. In addition, an estimated 573 public and private schools enrolling about 163,000 students in grades K-12 are located near an airport runway or heliport.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0003**Commenter Type:** Advocacy Organization**Commenter:****Organization:** Law Foundation of Silicon Valley**Excerpt Text:**

Although lead has been banned in products such as paint, leaded aviation gasoline continues to be “the largest remaining source of lead emissions in the U.S.” [Footnote 4: <https://www.sccoe.org/Documents/Whitepaper%20Children%27s%20Exposure%20to%20Lead%20in%20Santa%20Clara%20County.pdf>] Exposure to lead is correlated with proximity to small airports, and three million children in the U.S. currently live within 1,000 meters of an airport with lead-fueled airplanes.[Footnote 5: Id.] Given the ongoing threat to public health from leaded aviation fuel, the EPA urgently needs to move forward with their proposed endangerment finding and prevent at-risk communities from suffering further lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0016**Commenter Type:** Federal Elected Official**Commenter:****Organization:** Office of the California Attorney General et al.**Excerpt Text:**

While lead air emissions represent a risk to the health of children in all communities surrounding airports using leaded aviation fuels, some children are at a disproportionate risk of harm. Six of the top 18 airports, including Suffolk County's Republic Airport – the largest single emitter of aviation fuel-related

lead air emissions in the state – have a greater percentage of young children living within 1.5 miles than other areas of the counties in which they are located. Of particular concern, nearly 6,000 elementary school children are enrolled in a school located within 1.5 miles of one of the top 18 lead-emitting airports in New York. Ten of the top 18 airports (more than half) have at least one elementary school within a 1.5 mile distance from the airport runway(s).

[See original attachment for Table 3: Top 18 Airports, Schools and Students within 1.5 miles (2019-2020)]

Of these elementary schools, according to New York State Education Department data, six had at least one metric of vulnerability (people of color, English not first language, percent of disabilities, percent receiving free/reduced lunch, and homelessness) greater than the equivalent county’s metrics. For example, Republic Airport, the highest lead emitting airport in the state, is located in Farmingdale, New York. There is one elementary school within 1.5 miles of the airport runways, Saltzman East Memorial Elementary, and 595 children attend that school.

Saltzman East Memorial Elementary’s student body is composed of 66 percent children of color, 10 percent of whom are English language learners, 51 percent receive free or reduced school lunch, 5 percent are homeless, and 13 percent have a disability.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0019

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Many Pennsylvania’s general aviation airports are also located remarkably close to residential communities and schools. In Chester County, the Brandywine Regional Airport is Pennsylvania’s sixth highest leader in lead emissions at 329 pounds, and is located a mere 1,289 feet from a residential neighborhood, 1,353 feet from a preschool and 1,919 feet from Fernhill Lake water reservoir, which serves as a habitat for various plants and animals. The Coatesville- Chester County Airport, which is also in Chester County, is within one mile of at least three elementary schools and 71 percent of the surrounding population consisting of children under the age of five.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0022

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

These emissions disparately impact people of color, children under the age of five, and linguistically isolated populations. Based on data gathered from EPA’s 2017 National Emissions Inventory and EJScreen, nine out of Wisconsin’s top 15 lead-emitting airports are in communities at or above the 50th percentile for people of color. Five of the highest-emitting airports are located in linguistically isolated communities, and ten are in communities that are at or above the 50th percentile for population under age five.

As one example, Sheboygan County Memorial Airport in northeast Wisconsin is the third highest lead-emitting general aviation airport in the state, with 313 pounds of lead emissions based on EPA’s most recent emissions data. The surrounding community is already contending with lead emissions from various sources. It is ranked second in 2021 for the most lead emissions generated by stationary sources in

the state and falls in the 77th percentile for lead paint exposure.[Footnote 47: State of Wisconsin Department of Natural Resources, Historical Air Emissions Information, <https://dnr.wisconsin.gov/topic/AirEmissions/Historical.html> (2012-2021 Lead emissions by county).][Footnote 48: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (Point Source Data); EPA, EJScreen, <https://ejscreen.epa.gov/mapper/>.]

Lawrence J. Timmerman Airport in Milwaukee, similar to Sheboygan County Memorial Airport, is in an area with high lead emission from stationary sources.[Footnote 49: State of Wisconsin Department of Natural Resources, Historical Air Emissions Information, <https://dnr.wisconsin.gov/topic/AirEmissions/Historical.html> (2012-2021 Lead emissions by county).] It is in a community with high lead paint exposure (66th percentile) and large populations of linguistically isolated (72nd percentile) and low-income people (84th percentile), people of color (93rd percentile), and children under the age of five (74th percentile).

Comment Number: EPA-HQ-OAR-2022-0389-0245-0023

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Finally, Dane County Regional Airport and Morey Field, both in Dane County, accounted for 229 and 213 pounds of lead emissions in 2017, respectively. Both airports are in areas of the county where an uncharacteristically high proportion of residents are non-white, household predominantly speak a language other than English, and/or low-income populations.[Footnote 50: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (Point Source Data); EPA, EJScreen, <https://ejscreen.epa.gov/mapper/>.] Children living or attending school near Dane County Regional Airport are uniquely impacted by lead emissions in the area. The surrounding community is in the 86th percentile for population under the age of five.[Footnote 51: See EPA, Alaska Community Action on Toxics et al. Petition for Rulemaking Regarding Lead Emissions from Aircraft that Operate on Leaded Fuel, <https://www.epa.gov/system/files/documents/2022-01/aviation-leaded-avgas-petition-exhibits-final-2021-10-12.pdf>.] In light of the above information, lead emissions from Wisconsin's general aviation sector present a substantial public health threat in Wisconsin, most notably the state's children.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0009

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

The damaging effects of leaded avgas pollution are not limited to overburdened communities. The Reid-Hillview Airport, a county airport ten miles southeast of San Jose International, ranks ninth in the state for airport-lead emissions but has recorded lead concentration levels that exceed federal air quality standards for lead.[Footnote 32: EPA (2020), Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports at 59-60, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100YG52.pdf>. The Reid-Hillview Airport is in a census tract that has a relatively low pollution burden.] Children growing up near this airport are exposed to uncharacteristically high levels of lead emissions from avgas. [Footnote 33: Children living and attending school near the Montgomery-Gibbs Airport in San Diego are similarly at

risk of elevated blood lead levels despite living in a part of the state with a relatively low pollution exposure/burden. The Montgomery-Gibbs Airport is the third largest lead-emitting airport in the state, and piston-engine planes operating out of the airport produce 1.5 times more annual lead emissions than Reid-Hillview.]

Comment Number: EPA-HQ-OAR-2022-0389-0253-0001

Commenter Type: Private Citizen

Commenter: Patricia FitzGerald

Organization:

Excerpt Text:

I live directly under the flight path of touch and goes from Beverly airport, small engine planes, 11 to 20 hours a day. Sometimes up to five circling at the same time. These numbers of flights have increased tenfold in the last few years. The noise prevents us from using our yards, keeps us from being able to work at home, or even open windows, most days, and we live almost 4 miles away from the airport. It never used to be like this, I grew up here.

My concern for leaded fuel fumes coming from these planes is immense. There is no safe level for lead poisoning, and we are being poisoned on a daily basis. Our children are being poisoned!

I urge those in power to put a stop immediately to the use of leaded fuels in any of these planes. We cannot use them in our automobiles because of its poisoning capabilities, and we should not be able to use it in airplanes that fly over our homes and land and poison not only the air we breathe and the ground we walk on, but the land we grow food on, that our children and pets play on. We have a right to breathe clean air and you have no right to deny us that.

Comment Number: EPA-HQ-OAR-2022-0389-0256-0003

Commenter Type: Private Citizen

Commenter: Kathryn Sharpe

Organization:

Excerpt Text:

We know from studies conducted in the late 1970s and early 1980s that lead is extremely toxic to humans, and particularly to the health of children, in whom it causes irreversible damage, as well as morbidity and mortality in adults. It lingers in the soil and sickens people who live near airports. Nearly half a million adults die annually from cardiovascular disease and irreversible tissue damage caused by exposure to lead in their childhoods. Every day we delay means more lead will contaminate our environment.

Comment Number: EPA-HQ-OAR-2022-0389-0263-0004

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles CA, Board of Supervisors

Excerpt Text:

The EPA estimated in 2020 that roughly 5.2 million people live in a census block intersecting with a 500-meter buffer around an airport runway or a 50-meter buffer around a heliport. Of those people, 363,000 are children aged 5 years and under. In addition, an estimated 573 public and private schools enrolling about 163,000 students in grades K-12 are located near an airport runway or heliport.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

Alaska Community Actions on Toxics (ACAT) conducted a very preliminary investigation of lead levels in the topsoil of gardens, parks, and schools within approximately one mile from Merrill Field in Anchorage. ACAT detected levels of lead in the soil of vegetable gardens, parks, and schools that averaged between 5.3 and 22.9 ppm (Figure 1). Furthermore, there was variation in the samples collected at each site, with lead levels ranging from 5.1 to 66.9 ppm and the highest lead levels detected southwest of the runway (Figure 2). Children should be able to play in parks and school playgrounds, and eat vegetables from gardens, without parents fearing that their children will be poisoned with lead. Lead poisoning is the most preventable environmental disease of young children, but effort must be put towards removing all sources of lead, so children are not exposed (CDC, 2022). Although we cannot definitively conclude that the source of lead we detected in soils derives from avgas combustion at Merrill Field, there is cause for concern that should be further investigated.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0015

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Multiple studies support a causal link between lead emissions from piston-engine aircraft and increased blood lead levels in individuals who work in, and live around, general aviation airports. A 2013 study of aircraft-maintenance workers in the Republic of Korea found higher blood lead levels of maintenance workers based in airports that service propeller-driven aircraft and use leaded avgas than those of maintenance workers that are based in airports that service jets, which do not use leaded avgas; the authors concluded that leaded avgas emissions “could increase the [blood lead levels] of aircraft maintenance crews.” [Footnote 94: Won-Ju Park et al., Blood Lead Level and Types of Aviation Fuel in Aircraft Maintenance Crew, 84 *Aviation, Space, & Env’t Med.* 1087, 1089 (2013), <https://doi.org/10.3357/ASEM.3647.2013>.] Other studies, including those cited in the Proposed Endangerment Finding, have shown that children living in close proximity to airports where leaded avgas is used have higher blood lead levels than children who do not. [Footnote 95: See Marie Lynn Miranda et al., A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, 119 *Env’t Health Persps.* 1513, 1516 (2011), <https://doi.org/10.1289/ehp.1003231> (examining the relationship between proximity to airports in North Carolina where leaded aviation gas is used and blood lead levels in children and finding that “children living within 500 m, 1,000 m, or 1,500 m of an airport had average blood lead levels that were 4.4, 3.8, or 2.1% higher, respectively, than other children”); Zahran et al., supra note 80, at 575–610 (examining the blood lead levels of children living within two kilometers of airports in Michigan and finding that “the odds that a child’s [blood lead levels] will eclipse CDC thresholds for concern increases dose-responsively in proximity to airports, declines measurably in neighborhoods proximate to airports in the months following 9/11” when there was less air traffic, and “increases dose-responsively in the flow of [piston-engine aircraft] traffic”); Mountain Data Grp., *Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California* 37–45 (Aug. 2021) (“RHV Lead Study”) (explaining that “children proximate to [the general aviation airport] Reid-Hillview Airport present with systematically higher [blood lead levels], net of other measured sources of

lead exposure risk, child demographic characteristics, and observed and unobserved neighborhood conditions,” that children who live downwind of the airport had higher blood lead levels than those who did not, and that the blood lead levels “of sampled children increase with exposure to piston-engine aircraft operations at [the airport], net of all other factors” and ultimately “suggesting that child [blood lead levels] increase dose-responsively with [piston-engine aircraft] traffic”); Sammy Zahran et al. Leaded Aviation Gasoline Exposure Risk and Child Blood Lead Levels, 2 PNAS Nexus Article No. pgac285 (2022), <https://doi.org/10.1093/pnasnexus/pgac285> (analyzing RHV Lead Study data and finding “consistent evidence that exposure to avgas increases child BLLs”).]

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0004

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

Children living near general aviation airports are likely to be at significant risk of permanent and irreversible damage including increased rates of gun and domestic violence, reduced test scores and graduation rates, lowered IQs and economic production. These effects tend to persist into adulthood and combined with other factors to create harm beyond the families and communities directly affected, measurably reducing economic gains and social cohesions at larger scales that results from increased -- that results in increased antisocial behavioral traits and decreased aversion to risk and violence.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-009-0002

Commenter Type: Private Citizen

Commenter: Amalia Ponce

Organization:

Excerpt Text:

Therefore, I insist EPA to act now to protect communities to which I belong which are marginalized due to their income levels, their skin color and our place of birth. Please discard the conclusion that the lead emissions of airplanes using leaded fuel are not dangerous. They certainly are and I have many acquaintances that live here in the surrounding area and who are not informed. That’s why I am very concerned and interested in participating in this event. I will be able to convey the message to raise awareness. Several times our children behave in a certain way, and we do not know why. It is normal for us. But it could be that our children have lead transmission and we are not aware. That’s why I insist for EPA, this organization that is interested and that is helping us, to continue with its work. That’s all as far as I am concerned. Thank you very much.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-010-0002

Commenter Type: Private Citizen

Commenter: Veronica Licon

Organization: Cassell Community

Excerpt Text:

My children also get nosebleeds from the lead poison and there is really nothing I can do about it until the planes stop, then their nosebleeds will stop.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0004

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

As we also heard this morning, members of the nearby neighborhood in East San Jose know all too well the harms lead exposures cause to children and people of all ages, and this community is one of many across the country that continue to breathe leaded air due to aircrafts. Over five million people including more than 360,000 children under the age of five live near at least one of the airports where piston-engine aircrafts that use leaded fuel operate.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0007

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

Studies show that black children and children from low-income households have persistently been found to have higher blood lead levels than non-Hispanic white children, and those from higher income households. Low income communities and communities of color are also more likely to live near general aviation airports. Communities living next to the Reid-Hillview Airport provide a stark example of this problem and the need for EPA to address it. The one and a half mile area surrounding the airport is densely populated. It's home to 52,000 residents including almost 13,000 children, and 21 schools and childcare centers. It's also highly segregated. 61 percent of the residents identify as Hispanic or Latino and 79 percent report speaking a primary language other than English at home. For years this community has been uniquely burdened by environmental and socioeconomic harms including pollution, chronic disease and economic immobility. It has borne the front of the lead contamination from the Reid-Hillview for far too long

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-018-0001

Commenter Type: Advocacy Organization

Commenter: Cristina Carvajal

Organization: Wisconsin EcoLatinos

Excerpt Text:

I am the founder and Executive Director of Wisconsin EcoLatinos, a non-profit environmental conservation organization. I am here to ask the EPA to remove lead air pollution from small aircraft, a danger to public health and welfare. I live in Middleton, Wisconsin with my family. My youngest child attends Krome Middle School. The City of Middleton recently approved the expansion of the City of Middleton Municipal Airport, also known as the Morey Airport. This expansion will bring significant air traffic to the area mostly small aircraft. We are extremely concerned about the pollution this aircraft will bring to our homes and our schools especially lead pollution. Within two miles of the airport, there are two (26) preschools, three elementary schools, a high school and my son's middle school. The airport is also surrounded by several kids' sports venues, parks and neighborhoods. Some of the reports were about the negative effect of lead pollution on children's health, including learning disabilities and behavioral disorders.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-018-0002

Commenter Type: Advocacy Organization

Commenter: Cristina Carvajal

Organization: Wisconsin EcoLatinos

Excerpt Text:

According to the CDC, there is no safe level of blood lead in children. The use of leaded aviation fuel in Middleton Municipal Airport threatens the health of Middleton children, Middleton's children health.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0002

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

Children living near or going to school near airports where leaded fuel is used experience elevated levels of lead which as we learn today can lead to developmental delays and other issues. In College Park where I live, the small aircraft powered by piston engines frequently take off and land and flying near an elementary school and its associated playing fields. Those children are being exposed to lead in the air that they breathe as they go to school or as they play outdoors so what should be healthy activities are exposing these children to risks that could impact them for life.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-025-0001

Commenter Type: Private Citizen

Commenter: Katherine Riley

Organization:

Excerpt Text:

My name is Katherine Riley. I am an Assistant Professor Emerita from the Department of Public Health and Preventative Medicine at Oregon Health and Science University. I am also President of Washington County Kids a Non-profit in Washington County, Oregon that seeks to increase access to out of school time programs such as early childhood, after school and summer programs for kids. I also live in Hillsborough, Oregon and our house is right in the flight path for landings at the Hillsborough Airport and regular practice runs for flight training. We also live approximately one quarter of a mile from an elementary school and one quarter of a mile from a middle school. When we moved into our house about 30 years ago, the flight path was different and the school training flights didn't exist because the school was located in McMinnville, a more rural area. Since that time we are bombarded by the noise of the training flights but also I worry about what we cannot see or hear, the use of lead in AVGAS. As a person who is knowledgeable about public health, I know that exposure to any amount of lead is harmful to everyone but especially to children.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0002

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

Many general aviation airports are located in low-income communities of color. Children in these areas

are constantly exposed to lead hurting their developments and minds for their entire lives. Lead poisoning disproportionately effects communities of color with black children having the highest concentration of lead in their blood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-030-0004

Commenter Type: Advocacy Organization

Commenter: Marcie Keever

Organization: Friends of the Earth

Excerpt Text:

EPA and FAA should prioritize making unleaded AVGAS available at the highest moving airports and the airports with the highest number of children, low wealth people and people of color living nearby. The EPA has stated there is no safe level of lead emissions from aircraft since at least 2010 when it issued the advanced notice of rulemaking for lead in aviation. It must move with all speed to finalize this endangerment finding and move towards getting the lead out immediately. With five million people including more than 360,000 children under the age of children five, living within 500 meters of these airports and living with elevated blood lead levels are the ongoing of daily threat of elevated blood lead levels and other illness deserve no less. It is way past time we give them this.

Comment Number: EPA-HQ-OAR-2022_0389-0273-0001

Commenter Type: Private Citizen

Commenter: Julie Schwam Harris

Organization:

Excerpt Text:

My name is Julie Schwam Harris. I live at 1208 Pine Street in New Orleans, 70118, in a city that has extensive lead pollution problems from many sources. When I read about it currently being allowed in certain aviation fuel, I was shocked. As a citizen, I have followed and spoken up on the issue of lead contamination in paint, paint sanding, old pipes, and residue in soil. I knew that gasoline was by law supposed to be "lead-free" and I had no idea that there were an exception to the rule for certain small aircraft fuel. I believe that lead is one of the root causes of much violence, poor education outcomes and poverty that plagues our city. There are residential areas near the Lakefront Airport and crowds of people who gather and around festivals such as Jazz Fest and French Quarter Fest where small aircraft land and take off and fly to display advertising. Children who live or attend events in these areas are at risk.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0004

Commenter Type: Advocacy Organization

Commenter: Gary Keller

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

On January 1 of this year, the owners of the two airports in California, Reid-Hillview and Santa Martin banned the use of leaded fuel. This courageous board of supervisors in Santa Clara County against the bullying of the FAA, AOPA and the entire aviation industry drew a line in the sand, they made a stand to protect the children who live around those airports from the bombardment of leaded emissions from GA aircraft. They did what the health departments and EPA have been unable to do, unwilling to do or coerced into not doing. Since 1996, over 25 years ago, general aviation aircraft have been the largest

source of lead emissions in the U.S. and why has it not been until 2019 that any health department in this country even acknowledged the existence of this source of lead. Without Reid-Hillview this endangerment finding would not be taking place, it has reenergized a movement to save billions of children and their parents from toxic lead emissions. The aviation industry has all the power, the money and the major press releases to continue to delay the process of stopping this toxic shield. It is what they do best. Who will help us protect our children and grandchildren, they certainly won't. Will the EPA? Who is warning the parents of the children who are living near these airports of the lead health hazards there, the answer to that question is that no one is. Someone other than the County of Santa Clara Board of Supervisors needs to draw that line in the sand. We are counting on the EPA to do just that.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0009

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

A 2022 Four Part Pulitzer Funded Special Report: How Leaded Aviation Gasoline Is Poisoning a new Generation of Americans (html) 06-16-2022 | Pulitzer Center, also available at: Toxic Fuel [100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) AKA Avgas] — Quartz, reports in Part 2: Leaded airplane fuel is poisoning a new generation of American children (html), that Dr. Sammy Zahran turned to Michigan to analyze lead levels in 1 million children living around Michigan civil aviation airports (June 2017). Not only did the levels of lead in children's blood rise in proximity to airports, they tracked the monthly peaks and valleys of air traffic. Many believe that this 2014 study was as [bold, italics: close a link to avgas and child lead exposure] as scientists [bold: had ever found]!

The original study was performed in Michigan and published on 08-15-2014 in an early version of the study: The Effect of Leaded Aviation Gasonline [sp] on Blood Lead in Children (html) (pdf) 2014! | Munich Personal RePEc Archive (MPRA) | Universitätsbibliothek Library (html) | Ludwig-Maximilians-University Munich (html).

The study referenced Child Blood Lead Level (BLL) data from [bold: 1,043,391] Michigan children to [bold: 448] nearby airports in Michigan, as well as a subset of Michigan airports with detailed data on the volume of General Aviation (GA) piston-engine aircraft traffic including piston-engine helicopters.

How is it even possible that this key seminal study of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) related Child Blood Lead Level (BLL) data & study was overlooked, obscured or ignored, for well over a half a decade, literally unknown during or after the height of the Flint Lead Poisoning Debacle? How & where and was the "official" data obtained?

This continues to be one of Michigan Department of Transportation (MDOT) mysteries & best kept secrets in the State of Michigan, second only to bogus MDOT "Aviation in Michigan" phony related costs, literally millions of misused taxpayer dollars, the largest single waste of taxpayer money in the entire history of Michigan! Key SMEs at the Environmental Protection Agency (EPA) were NOT even aware of this key study as early as 2017-2018, it appears that actually nobody outside of small handful of SMEs were aware of this key study linking Child Lead exposure to Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL).

Response to Comments Regarding Children and Lead Emissions from Aircraft

Many commenters submitted comments regarding children and health risks from lead, including lead from aircraft. For example, some of these comments raise concerns about the potential for lead exposure

to children from living or attending school in close proximity to airports. Some of these comments suggest conducting research in neighborhoods located near airports to measure blood lead levels in children. Other comments state other concerns related to possible sources of lead exposure, including to children.

The EPA acknowledges the comments received regarding children and health risks from lead. As a general matter, the EPA notes that the federal government has a longstanding commitment to programs to reduce exposure to lead, particularly for children (see Section II.B of the final notice for this action for a summary of the EPA's regulatory actions to reduce lead exposure). As discussed in Section IV of the final notice for this action, consideration of information regarding the health effects of lead exposure to children, as summarized in the AQCDs for Lead² and the 2013 Lead ISA,³ informs the Administrator's final endangerment finding under CAA section 231(a)(2)(A). This action's discussion of the health effects of lead air pollution is found in Section IV.A.2 of the final notice, which includes specific discussion of effects observed in children. We further note that children's health is highlighted in other sections of the final notice, including the Supplementary Information Section B and an analysis providing demographic information on children living near airports is described in the background information in Section II.A.5 of the final notice to this action.

Many commenters make general statements about the serious health hazards that lead exposure poses to children. In addition, some commenters suggest that airborne lead is particularly dangerous for children, both because of their rate of breathing and because of their developing brains. In response, the EPA notes that to the extent these comments offer these views without identifying any aspect of the proposal they believe should be finalized differently, the EPA considers the comments to not be adverse to this action, and thus they do not require a response. The EPA further notes that the scientific evidence described in Section IV.A.2 of the final notice for this action reflects that lead has been demonstrated to exert a broad array of deleterious effects on multiple organ systems, and it includes discussion of a range of health effects in children. As described in Section IV of the final notice, this information is part of the scientific and technical basis for the final endangerment finding. We note that further discussion of comments related to health effects of lead, the endangerment finding, and the scientific evidence that supports it, can be found in Section 5 of this RTC document.

Some commenters state that children who live or attend school near airports may experience higher levels of exposure compared with children who live or attend school more distant from an airport and cite recent research reporting higher blood lead levels in children who live or attend school near one highly active general aviation airport. Commenters additionally assert that lead air emissions from airport operations can also contribute to and/or exacerbate existing childhood lead exposures in surrounding communities. In response, the EPA notes that, as stated in the background information mentioned in section of II.A of the final notice, there have been studies reporting positive associations of children's blood lead levels with proximity to airports and activity by covered aircraft, and as described in Section II.A.3 of the final notice, several studies have measured higher concentrations of lead in air near airports with piston-engine aircraft activity.

Some commenters suggest conducting or funding more research, including more studies on children's blood lead levels in proximity to airports. Other commenters state that no more studies or data are needed to justify actions to protect children from exposures to lead emissions near airports. After consideration of these comments, for the purposes of this action, the EPA responds that scientific evidence and information described and summarized in Section IV of the final notice provides ample support for the Administrator's final endangerment finding. Given the nature and the extent of the evidence and information supporting the conclusion that the lead air pollution may reasonably be anticipated to endanger public health and welfare, in the EPA's view there is no need to delay the endangerment finding

² See, e.g., EPA (2006) Air Quality Criteria for Lead. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

³ EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

for additional studies. To the extent that these comments are suggesting that the EPA fund or conduct such studies for a different purpose, they are beyond the scope of this action and require no response.

One commenter suggests that the EPA and other organizations were unaware of an earlier study by Zahran that analyzed blood lead levels of children living in close proximity to civil aviation airports in Michigan. This comment asserts that key EPA staff were unaware of this study in the 2017-2018 timeframe and asserts similar concerns that other organizations were unaware of the study and that the same study was not included in the Airport Cooperative Research Program (ACRP) report, “Reducing the Impact of Lead Emissions at Airports.” In response, the EPA notes that it referenced this study as part of the background information that provides additional context for the proposed action (see 87 FR 62758, n.44) as well as for the final action. To the extent the comment concerns the EPA’s awareness of this study several years before the proposal, or the awareness of other organizations in preparing a different report, the comment is beyond the scope of this action and requires no response.

Another commenter asserts that a study conducted by the EPA of air samples at 17 U.S. airports found that these airports were “safe” and “in essence ... justified their continued poisoning of children for the next eight years.”⁴ The EPA responds that it disagrees with the commenter’s characterization of this study and its conclusions. The data from the airport monitoring study at 17 U.S. airports are reported in Table 2 of the final notice, and it did not conclude that these airports were “safe.” Moreover, as described in Section V.B of the final notice, lead concentrations were measured at two airports in this study that violate the primary and secondary lead NAAQS. Given that the lead NAAQS are established to protect public health and welfare, contributions of lead to concentrations that exceed the lead NAAQS are of particular concern to the Administrator and are persuasive support for the conclusion that lead emissions from engines in covered aircraft cause or contribute to the endangering lead air pollution.

Some commenters further note the potential for children to be exposed to lead through a variety of media, including air, water, soil, or food. In response the EPA notes that, as recognized in Section IV.A.2 of the final notice for this action, human exposure to lead that is emitted into the air can occur by multiple pathways. The EPA further responds to comments regarding the fate and transport of lead in Section 6.1.3 of this RTC.

In addition to personal concerns about the health hazards that lead exposure poses to children, commenters often describe the characteristics and conditions of their own local communities, including: the number and location of homes, schools and parks near airports; the flight paths taken by aircraft that utilize neighboring airports; increased aircraft activity and type of operations (e.g., flight schools) at individual airports near them; and concerns about noise and crashes. In response, we acknowledge and appreciate these comments from private citizens and local governments sharing their experiences; however, comments such as these are outside the scope of this final action and require no response.

One commenter states that pilots and others who need to service and clean the lead out of plane engines may not only expose themselves to lead, but may also bring home lead on their clothing to their families. While this comment is outside the scope of this action and requires no response, we note that the CDC has reported on this issue (<https://www.cdc.gov/niosh/hhe/reports/pdfs/2012-0115-3186.pdf>) and to the extent this issue involves workers, it is under the jurisdiction of the Occupational Safety and Health Administration.

In this section of the RTC, the EPA is focusing on comments related to children and lead emissions from aircraft. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, some commenters suggest that there be more education and outreach about protecting their communities from lead exposure, which EPA responds to in Section 8.2.2. Environmental justice concerns were raised by some commenters, specifically mentioning the

⁴ Comment No. EPA-HQ-OAR-2022-0389-TRANS-016-0003

disproportionate impacts of elevated blood lead levels on non-Hispanic black children. The EPA responds to comments about environmental justice in Section 3 of this RTC document.

See Sections 5 and 6 of this document for responses related to the endangerment finding and cause or contribute finding, respectively. Further responses to comments regarding legal and procedural topics can be found in Section 7 of this document, including responses to comments regarding the banning of lead in aviation gasoline in Section 7.3. Responses regarding the level of the lead NAAQS can be found in Section 8.2.1.

Section 5. Comments on the EPA’s Finding that Lead Air Pollution is Reasonably Anticipated to Endanger Public Health and Welfare

5.1. Comments Expressing Support for the EPA’s Finding that Lead Air Pollution is Reasonably Anticipated to Endanger Public Health and Welfare

Comment Number: EPA-HQ-OAR-2022_0389-0277-0001

Commenter Type: Private Citizen

Commenter: Dallas Callahan

Organization:

Excerpt Text:

I am writing to support the Environmental Protection Agency's proposed finding the lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. As an aviation safety professional, I understand how harmful lead exposure can be to human health, especially children. It can also negatively impact the environment, including water sources, soil, and plants. We have better options than lead fuel, and more companies will invest in those options if lead fuel is banned.

Comment Number: EPA-HQ-OAR-2022_0389-0633-0001

Commenter Type: Private Citizen

Commenter: Karin Hemmingsen

Organization:

Excerpt Text:

As a family physician and public health professional who trained and worked in the Boston area at a time when many children were being treated for lead poisoning, I have seen what lead exposure can do. And that was at a time when the maximum recommended exposure level was significantly higher than it is set now.

Comment Number: EPA-HQ-OAR-2022_0389-0676-0001

Commenter Type: Private Citizen

Commenter: Betty Solek

Organization:

Excerpt Text:

Lead is highly toxic and does not degrade. The harm from lead has been known for hundreds of years. No level of lead exposure is safe. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems. Flight training planes, single prop are the worst. And these planes fly touch and go practice over schools in a nearby town. Lead harms adult cardiovascular health.

Comment Number: EPA-HQ-OAR-2022_0389-0691-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Quiet Communities, Inc.

Excerpt Text:

An endangerment finding by the EPA would give critical impetus towards a phased-out ban on leaded aviation fuel. A ban is long overdue and must be achieved as quickly possible. All necessary resources and efforts must be put towards that goal in order to protect the health of children, the public, and the environment. The harms of lead have been known since 2000 BC and linked to different diseases/disorders in various civilizations over the course of history (Needleman, 1999), and may even have contributed to the fall of the Roman Empire. Lead does not breakdown but accumulates in the environment. Its toxicity does not diminish. The harms of lead to children include damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems (NASEM, 2021; US Centers for Disease Control, 2012; American Academy of Pediatrics). In adults, lead is now known as a cause of coronary heart disease and death. No level of lead exposure. Poor and minority communities living near airports are at greatest risk, as described in the proposed endangerment finding (EPA, 2022). Harms from lead damage the US economy in terms of: 1) diminished IQ resulting in lost wages of \$165 billion to \$319 billion (Marshall, 2020; Gould, 2009; Grosse, 2002); 2) cardiovascular, neurological, kidney disorders, and mortality (Lanphear, 2018); and, 3) a variety of societal problems linked to lead exposure -- criminal behavior, personality, psychopathology, diminished social mobility (McFarland, 2022; Wright, 2021)

Comment Number: EPA-HQ-OAR-2022_0389-0732-0002

Commenter Type: Other

Commenter:

Organization: Broadway Flushing Homeowners Association

Excerpt Text:

I am writing in my capacity as the current president of the Broadway Flushing Homeowners Association, representing over 300 hundred homeowners in Northeast Queens, NY, to ask that you please pay attention to this public health crisis in the making. My neighborhood is besieged with an alarmingly increasing volume of low airline traffic for years from LGA. Besides the assault on our hearing with the excessive noise that causes sleep disruption and anxiety, now there is evidence of unacceptable lead emissions, too.

As you know, lead is highly toxic and does not degrade and its harms have been known for hundreds of years. It causes untold harm on children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems. It causes major damage on an adult's cardiovascular system. We have already agreed, as a society, that no level of lead exposure is safe!

Comment Number: EPA-HQ-OAR-2022_0389-0733-0003

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

Studies have been done over and over again, providing chilling results of the lack of development of a

child's brain, for those exposed, especially living near airports. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease. I am concerned for all these groups.

Comment Number: EPA-HQ-OAR-2022_0389-0747-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

This pollution from Whiteman airport affects the health of my family that lives in the area. It's an injustice to ignore this issue for the sake of private plane owners to enjoy their luxuries at the expense of residents in the area. Change needs to happen.

Comment Number: EPA-HQ-OAR-2022_0389-0736-0002

Commenter Type: Private Citizen

Commenter: Greg Bell

Organization:

Excerpt Text:

I myself suffer from neuropathy, which, at the very least, is exacerbated by lead exposure.

Lead in our, our water, our soil? That is NOBODY'S idea of a good thing, and you are responsible for facing that fact.

Comment Number: EPA-HQ-OAR-2022_0389-0751-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is a persistent, cumulative toxin that never goes away; it stays in the environment and is difficult or impossible to mitigate. There is no safe level of exposure, and lead exposure has been associated with a multitude of health problems. Yet, decades after it was banned in products and automobile fuel, private industry is still allowed to poison people living around airports. Children living near airports or attending school under a flight path may be afflicted with health issues for the rest of their lives. Pilots and others who need to service and clean the lead out of plane engines may not only expose themselves but also bring home lead on their clothing to their families and expose them. The Reid-Hillview study showed that children living near the airport had lead exposure blood levels at the same level- and sometimes exceeding- children exposed to lead in Flint, Michigan. This is a health EMERGENCY.

Comment Number: EPA-HQ-OAR-2022_0389-0755-0001

Commenter Type: Private Citizen

Commenter: D. Milton

Organization:

Excerpt Text:

Lead is highly toxic and does not degrade. The harms have been known for hundreds of years. Lead

harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems Lead harms adult cardiovascular health. No level of lead exposure is safe. We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families. We do not need more studies or data - we need action to protect children, our health, and our environment now.

Comment Number: EPA-HQ-OAR-2022-0389-0142-0002

Commenter Type: Private Citizen

Commenter: Christopher Eliot

Organization:

Excerpt Text:

According to an EPA history of lead poisoning, the dangers of the metal were known to the ancient Romans (<https://archive.epa.gov/epa/aboutepa/lead-poisoning-historical-perspective.html>). Locally, we have been talking about it for years (https://www.thebedfordcitizen.org/2020/11/concerns-about-lead-in-aviation-fuel-raised-at-hanscom-field-advisory-commission/?utm_campaign=concerns-about-lead-in-aviation-fuel-raised-at-hanscom-field-advisory-commission&utm_medium=rss&utm_source=rss). It is thought that lead pollution may be linked to crime rates (<https://www.journals.uchicago.edu/doi/full/10.1086/707127#d2608128e1>).

Leaded AvGas has been linked to health problems in children (<https://news.sccgov.org/sites/g/files/exjcpb956/files/documents/RHV-Airborne-Lead-Study-Report.pdf>).

The FAA knows that leaded AvGas must be phased out (<https://www.faa.gov/newsroom/faq-industry-chart-path-eliminate-lead-emissions-general-aviation-end-2030>).

The medical and public health facts about lead have been clear for decades. Lead was removed from motor fuel long ago because of its well-established adverse health consequences. It should be obvious that lead in AvGas has the same health consequences as lead in motor fuel and an EPA finding to this effect is long overdue. There is no justification for any further delay.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Lead is lethal. Every day of delay in banning this pernicious toxin means more people will die. A 2018 Lancet Public Health study found that nearly 412,000 cardiovascular disease deaths in the U.S. each year are due to lead contamination. This mortality rate applies only to lead impacts and does not include the higher rates of coronary heart disease, stroke and death associated with the noise generated by aviation activity.

Comment Number: EPA-HQ-OAR-2022-0389-0174-0001

Commenter Type: Private Citizen

Commenter: Glen Anderson
Organization:

Excerpt Text:

I IMPLORER YOU TO PROTECT PUBLIC HEALTH!!!!!!

Airplane fuels contain LEAD, which is lethal. YOU MUST PROTECT US FROM THAT DEADLY TOXIN!!!!!!

2018 Lancet Public Health study found that nearly 412,000 cardiovascular disease deaths in the U.S. each year are due to lead contamination. Lead also causes other kinds of health problems and kills people in other ways too.

Comment Number: EPA-HQ-OAR-2022-0389-0183-0007

Commenter Type: Private Citizen

Commenter: Sheetal Patel

Organization:

Excerpt Text:

In a study published by the NIH about Costs of IQ Loss from Leaded Aviation Gasoline Emissions, it is stated that humans can be exposed to lead through inhalation of lead-containing particles, ingestion of contaminated soil or lead paint, lead from private and public drinking water distribution systems, and through skin absorption. Lead exposure leads to health impacts including disruption of neurological, renal, reproductive, and physical development systems. There is enough evidence that even low levels of lead in the blood are associated with neurological impacts in children. Cognitive and neurodevelopmental effects of lead have been shown to lead to decreases in IQ tests, lower performance on standardized testing, and decreased graduation rates. Other cognitive and behavioral neurological effects resulting from lead exposure include an increase in attention-deficit behavior, conduct problems, memory loss, and poor language performance.

Studies have shown that eliminating lead from automobile fuel, new residential paint, and plumbing systems over the past several decades have contributed to significant economic benefits. There is a lack of studies for nationwide IQ-related benefits from eliminating lead from aviation fuel. Most studies have only focused on the contribution of avgas to elevated lead levels at individual airports or regions. One study states that the total consumption of leaded avgas in the U.S. in 2008 was 248 million gallons. The most common formulation of avgas supplied in the U.S. has been "100 Low Lead" (100LL), which has a maximum lead concentration of 2.12 gPb/gal.

The EPA knows that there is no safe level of lead exposure as researchers have found lead unsafe at any level for the last 40 years. We need to act now and not wait for more scientific data on lead exposure to the environment. Lead poisoning prevention should be a top priority of the EPA regardless of where much of the population lives and is affected. This has become a major public health issue and addressing it everywhere is important.

Comment Number: EPA-HQ-OAR-2022-0389-0186-0001

Commenter Type: Private Citizen

Commenter: Rick Reibstein

Organization:

Excerpt Text:

Concerning the question of whether lead should be considered a dangerous air pollutant, I will keep it simple. Lead doesn't belong in our living environment. Early humans had orders of magnitude less lead than we have. It should not have been pulled out of the earth and dispersed, and that's a lesson we must learn, or we cannot consider ourselves to have an intelligent society. Lead does not just harm our intelligence but that we persist in allowing its spread is a sign that our collective intelligence is not what it should be. All due speed must be taken to eliminate the further addition of lead to our bodies, as it accumulates, does not break down, and continues to cause damage.

Comment Number: EPA-HQ-OAR-2022-0389-0193-0001

Commenter Type: Private Citizen

Commenter: Janell Cannon

Organization:

Excerpt Text:

It has long been established that there is no known safe level of lead exposure, which when introduced into the body, causes liver, kidney, brain, and other damage.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0003

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Comment

Avgas AKA 100LL Leaded Aviation fuel with Tetraethyl Lead (TEL) represents an Aviation "192 million gallon a year" Public Health, Safety & Welfare Loophole, Crisis and true Nightmare permanently damaging millions including extremely vulnerable populations on a daily basis, a Public Health debacle.

NOTE: SEE EPA Particulate Matter PM2.5 comparison (image) showing combustion particle relative size,

e.g. particulate matter less than $< 2.5\mu$ (microns) for metals such as Tetraethyl Lead (TEL), almost thirty times smaller than human hair.

Almost Six Decades of careful investigation, research, study after study after study resulting in a voluminous amount of human data & human evidence of permanent damage clearly show that 100LL Leaded Aviation Fuel AKA Avgas with Tetraethyl Lead (TEL) is directly responsible for millions of premature deaths, preventable illnesses and negative health effects while communities of millions of residents especially vulnerable populations including babies, pregnant moms and school children continue to be permanently harmed. When it comes to babies, children & other vulnerable populations the science is crystal clear, ANY exposure to Tetraethyl Lead (TEL) causes irreversible and life-long health effects.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0002

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

There is no known safe threshold for lead exposure, as measured by blood lead levels; lead's adverse

effects on human health, and particularly on the development of children, are well established. It has been known for many years that lead can accumulate in the body and result in a variety of adverse health effects. Exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Young children are particularly at risk of lead poisoning. In children, the adverse health effects of lead exposure are often irreversible. Lead poisoning may result in behavioral issues, reduced intelligence, anemia, and liver or kidney damage. Lead is also harmful to adults. Lead poisoning can result in reproductive issues in men and women, high blood pressure, kidney disease, digestive issues, nerve disorders, memory and concentration issues, and muscle and joint pain. There is also evidence that exposure to lead can result in cancer in adults.

EPA started regulating lead additives in gasoline in 1973 and banned the sale of leaded gasoline for on-road vehicles in 1996 [Footnote 1: EPA, EPA Takes Final Step in Phaseout of Leaded Gasoline, updated January 29, 1996, available at <https://archive.epa.gov/epa/aboutepa/epa-takes-final-step-phaseout-leaded-gasoline.html>]. Despite this achievement, EPA has not reduced lead emissions from the aviation sector.

Comment Number: EPA-HQ-OAR-2022-0389-0202-0004

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

There are many adverse health effects from lead exposure for both children and adults, which is cumulative, and impacts our society in many ways including loss of IQ, increased medical costs, and premature death due to the lasting impacts of lead.

Comment Number: EPA-HQ-OAR-2022-0389-0213-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

As stated in the Proposed Finding, “low levels of lead in young children’s blood have been linked to adverse effects on intellect, concentration, and academic achievement” and “there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure” [87 Fed. Reg. 62755]. The “no health effects” threshold determination is supported by the Centers for Disease Control (CDC), which bases its Blood Lead Reference Value on the distribution of blood lead levels in U.S. children aged 1-5 years, not on health data, because “No safe blood lead level in children has been identified.” [Footnote 1: Centers for Disease Control Childhood Lead Poisoning Prevention website, Blood Lead Reference Value and Health Effects of Lead Exposure pages, accessed December 20, 2022.]

Comment Number: EPA-HQ-OAR-2022-0389-0215-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Lead is a neurotoxin known to disproportionately harm children as well as minority and economically disadvantaged populations. Exposure to lead even in very small amounts is linked with IQ loss, learning

and behavior problems, impulse control issues, juvenile delinquency and ADHD. In adults it is associated with higher rates of cardiovascular deaths, reproductive problems, miscarriages, kidney ailments and increased violence. The adverse impacts of lead are potentially irreversible.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0009

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

Figure 1: Demonstrated proximity from Cloquet-Carlton County Airport to 2 local schools (upper left) within the boundaries of the reservation; the Fond du Lac Ojibwe School and Fond du Lac Headstart. Also shown are multiple residences and natural areas, including gardens, forests, ponds, streams, and lakes. The orange line on the right hand portion of this map constitutes the nearby portion of the eastern reservation boundary. (Image Source: Google Earth)

As poignantly stated by the EPA in this docket and the 2013 Lead ISA, “there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure.” [Footnote 1: EPA (2013) ISA for Lead. Executive Summary “Effects of Pb Exposure in Children.” pp. lxxxvii-lxxxviii. EPA/600/R–10/075F, 2013] Further referenced in this docket, “Residential proximity to airports implies that there is an increased potential for exposure to lead from covered aircraft engine emissions.” [Footnote 2: EPA Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. Section 4.2.1] As a reservation with a municipal airport (operating since 1942) within its exterior boundaries, and with two schools, tribal housing, and local residences in close proximity to the airport (some less than 1 kilometer), leaded aircraft fuel is of concern for our community (Figure 1).

As evidenced through several mentioned studies, there are risks of adverse human health effects with increased blood lead levels within adult populations: cardiovascular issues like increased blood pressure, hypertension, coronary heart disease, or cardiovascular mortality, as well as cognitive effects such as anxiety, depression, and impacts on the immune system.[Footnote 3: Klemick et al., 2022. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. International Journal of Environmental Research and Public Health. 19(10):5941.][Footnote 4: EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013][Footnote 5: EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68. EPA, Washington, DC, EPA/600/R– 10/075F, 2013.] Native American populations already suffer from disproportionately high rates of these chronic issues, “including double the rate of heart disease compared to other populations, higher rates of obesity, the highest rates of high blood pressure, cholesterol, and Type II diabetes of any racial group in the country.” [Footnote 6:] Children can also be especially vulnerable to the effects of lead exposure. Cognitive effects in children like depression, conduct disorders, anxiety, impulsivity, hyperactivity, and other developmental effects can negatively impact academic performance.[Footnote 7:] While children are still developing, their organ systems may be left especially vulnerable to lead, and some neurocognitive effects of lead on concentration, intellect, and academic achievement may be transient, while other effects may persist into adulthood. .[Footnote 4: EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R– 10/075F, 2013][Footnote 8:] Working to reduce lead emissions in the air from covered aircraft would likely help to lower lead exposure in communities around airports and thus help improve the overall health, academic achievement, and quality of life of adults and children living in these areas around the country.

Comment Number: EPA-HQ-OAR-2022-0389-0231-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

There is no safe level [Footnote 1: https://www.cdc.gov/biomonitoring/Lead_FactSheet.html] of lead. CleanEarth4Kids.org calls for the immediate stop of the sale, storage and use of leaded fuel without exception.

Lead is a dangerous neurotoxin that accumulates over time. There is no safe level of exposure to lead according to the World Health Organization [Footnote 2: <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health>], Centers for Disease Control [Footnote 3: <https://www.cdc.gov/nceh/lead/faqs/lead-faqs.htm>] and the American Academy of Pediatrics. [Footnote 4: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/default.aspx>]

Lead is especially toxic [Footnote 5: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>] to children and unborn babies. It damages kids' brains and nervous systems, lowers IQ, causes behavior problems and is linked to higher rates of suspension and detention [Footnote 6: <https://www.nber.org/papers/w23392>] along with lower reading and math test scores. [Footnote 7: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4387706/>] According to the EPA [Footnote 8: <https://www.epa.gov/lead/learn-about-lead>], lead does not break down in the environment and is toxic even at very low exposure levels.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

NCHH is the preeminent national nonprofit dedicated to securing healthy homes for all. Since 1992, NCHH has served as a highly regarded and credible change agent, successfully integrating healthy housing advocacy, research, and capacity building under one roof to reduce health disparities nationwide. We have completed numerous scientific research and policy projects on the lasting impact of lead hazards in paint, dust, soil, water, and the air and the need to address and eliminate these sources of lead.

There is no safe level of lead exposure for children, and an estimated 590,000 children in America have blood lead levels above the CDC's reference level. Lead exposure causes irreversible tissue damage during childhood development and is responsible for nearly half a million adults dying annually from cardiovascular disease. Lead exposure is also an urgent environmental and racial justice issue: Black children are more likely to be exposed to lead and suffer its harmful effects than White and Hispanic children due to decades of redlining and other racist housing policies.

Comment Number: EPA-HQ-OAR-2022-0389-0234-0001

Commenter Type: Professional Association

Commenter:

Organization: National Association of Clean Air Agencies (NACAA)

Excerpt Text:

NACAA supports this action in which the EPA Administrator proposes to find “that lead air pollution

may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act” and, further, “that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.”[Footnote 2: Ibid, 62,753.] The basis of these findings is the comprehensive review and consideration by agency experts of extensive scientific evidence that has been accrued over decades and peer-reviewed by EPA’s Clean Air Scientific Advisory Committee,[Footnote 3: <https://casac.epa.gov/ords/sab/f?p=105:17:11377933030519>] as described in the action.

Comment Number: EPA-HQ-OAR-2022-0389-0234-0005

Commenter Type: Professional Association

Commenter:

Organization: National Association of Clean Air Agencies (NACAA)

Excerpt Text:

EPA summarizes in the proposal its conclusions relative to lead exposure and effects observed in children and in adults, as well as other observed effects not specific to any age group. Significantly, EPA cites “the ‘causal relationship’ between lead exposure during childhood (pre and postnatal) and a range of health effects in children, including the following: Cognitive function decrements; the group of externalizing behaviors comprising attention, increased impulsivity, and hyperactivity; and developmental effects (i.e., delayed pubertal onset)” and “the ‘likely-to-be-causal’ relationship between lead exposure and conduct disorders in children and young adults, internalizing behaviors such as depression, anxiety and withdrawn behavior, auditory function decrements, and fine and gross motor function decrements.”[Footnote 5: Ibid, 62,775]

Moreover, EPA reiterates its previous conclusion that “it is clear that lead exposure in childhood presents a risk; further, there is no evidence of a threshold below which there are no harmful effects on cognition from lead exposure.”[Footnote 6: Ibid, 62,776.] The Centers for Disease Control confirm this:

“Protecting children from exposure to lead is important to lifelong good health. No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to negatively affect a child’s intelligence, ability to pay attention, and academic achievement.”[Footnote 7: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>]

Among adults, EPA reports, for example, that lead exposure can adversely affect cardiovascular function, blood pressure, kidney function and reproductive function. The agency cites a recent study assessing cardiovascular mortality rates in adults 65 and older living within a few kilometers and downwind of runways.[Footnote 8: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9140422/>] Although the study did not include an evaluation of blood lead levels, the researchers found higher mortality rates in adults living near single-runway airports (where the aircraft affected by this proposal are prominent) in years with more piston-engine air traffic, but not in adults living near multi-runway airports, suggesting the potential for adverse adult health effects near some airports.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0028

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

DISCUSSION

The EPA is Correct to Conclude that Leaded Avgas Endangers Public Health and Welfare

The evidence overwhelmingly demonstrates that leaded avgas meets the legal requirements for an endangerment finding. Section 231(a)(2)(A) of the Clean Air Act requires the EPA to issue emission standards to control the emission of any air pollutant from aircraft engines if the EPA determines that the pollutant “causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.”[Footnote 16: 42 U.S.C. § 7571(a)(2)(A).] This threshold determination – commonly referred to as an “endangerment finding” – requires two showings: (1) that lead air pollution as a whole may reasonably be anticipated to endanger public health or welfare, and (2) that emissions from use of leaded avgas in piston-engine aircraft cause or contribute to this pollution. The EPA provides more than enough evidentiary support for both prongs, and even this understates the evidence for a positive endangerment finding.

Public Health

The EPA has known for decades that lead air pollution and its impacts on communities constitute a public health crisis. Nearly fifty years ago, the EPA recognized lead as a “known toxic substance for which no beneficial biological role” exists and found that airborne lead was contributing to an “epidemic” of “[e]xcessive lead exposures among children.”[Footnote 17: U.S. EPA, EPA’s Position on the Health Effects of Airborne Lead at VII, VII-4 (Nov. 29, 1972), available at <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100EYMW.TXT>; see also, e.g., Prohibition on Gasoline Containing Lead or Lead Additives for Highway Use, 61 Fed. Reg. 3832, 3833 (Feb. 2, 1996) (recognizing that leaded fuel poses “a significant risk of harm to the health of urban populations, especially children”).] According to the U.S. Centers for Disease Control and Prevention, lead exposure can harm the nervous, cardiovascular, immune, and reproductive systems, damage the kidneys, and cause anemia and increased blood pressure.[Footnote 18: Agency for Toxic Substances and Disease Registry, Lead – ToxFAQs (2020), available at <https://www.atsdr.cdc.gov/toxfaqs/tfacts13.pdf>.] Moreover, lead avgas emissions are a particularly pernicious source of exposure: Because the lead particles released in aircraft exhaust tend to be significantly smaller in size than those from other sources, they have the “potential of rapidly penetrating the lung defenses” and “gain[ing] direct access to the brain,” increasing the potential for neurological and cognitive damage.[Footnote 19: NAS Report, supra note 11, at 56; see also Ex. A, Decl. of Bruce Lanphear [hereinafter “Lanphear Decl.”] ¶ 14 (attesting that “small particles of lead” from aircraft emissions “are readily absorbed and may be transported directly to the brain via the olfactory nerve”).]

Children are particularly vulnerable to lead, both as a result of behaviors that make them more susceptible to exposure and their greater sensitivity to lead toxicity.[Footnote 20: See, e.g., NAS Report, supra note 11, at 49.] Even at the lowest detectable levels, childhood exposure to lead may cause cognitive and intellectual impairment, harm academic performance, and increase risk for attention and behavioral disorders.[Footnote 21: Mountain Data Grp., Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California 1 (2021), available at <https://news.sccgov.org/sites/g/files/exjcpb956/files/documents/RHV-Airborne-Lead-Study-Report.pdf> [hereinafter “RHV Lead Exposure Report”]; Lanphear Decl. ¶ 7 (attesting that “[d]ozens of studies show that exceedingly low levels of lead adversely impact children’s cognitive abilities and neurodevelopment”); id. ¶ 9 (attesting that “[l]ead also increases the risk of children developing attention and behavior disorders such as ADHD”).] Indeed, decline in cognitive ability is steepest at lower blood lead levels.[Footnote 22: RHV Lead Exposure Report, supra note 21, at 2-3; see id. at 1 (explaining that “estimated marginal effects with respect to negative cognitive and behavioral outcomes in lead-exposed children are higher at lower [blood lead levels]”); Lanphear, Childhood Lead Poisoning Preventing: Too Little, Too Late, 293 J. of the Am. Med. Ass’n 2274 (2005).] The EPA’s 2013 Integrated Science Assessment for Lead unambiguously finds “no evidence of a threshold below which there are no harmful effects on cognition from lead exposure.”[Footnote 23: U.S. EPA, Integrated Science Assessment for Lead lxxxvii-lxxxviii (2013) [hereinafter “ISA for Lead”].]

Many of the harms caused by childhood lead exposure are irreversible. Childhood lead exposure, for instance, has been linked to measurable reductions in IQ and cognitive and behavioral impairments persisting into adulthood, as well as adult-onset physical health problems.[Footnote 24: See, e.g., RHV Lead Exposure Report, supra note 21, at 2; Reuben et. al., Association of Childhood Blood Lead Levels with Cognitive Function and Socioeconomic Status at Age 38 Years and With IQ Change and Socioeconomic Mobility Between Childhood and Adulthood, 317(12) *J. of the Am. Med. Ass'n* 1244 (2017); McFarland et al., Half of US Population Exposed to Adverse Lead Levels in Early Childhood, 119(11) *Proceedings of the Nat'l Acad. Of Scis.* 1 (2022) (concluding that average lead-linked loss in cognitive ability was 2.6 IQ points per person as of 2015 as a result of early childhood lead exposure); Lanphear Decl. ¶ 8] As the EPA notes, when a large share of a population is exposed – as is the case for airport-adjacent communities exposed to lead emissions from piston-engine aircraft – even small shifts in IQ are associated with significant public health harm.[Footnote 25: ISA for Lead, supra note 23, at xciii.]

Lead also threatens maternal health and birth outcomes.[Footnote 26: Lanphear Decl. ¶¶ 10-11.] Lead is a risk factor for preeclampsia, a disorder of severe hypertension in pregnant women.[Footnote 27: See Poropat et al., Blood lead and preeclampsia: A meta-analysis and review of implications, 160 *Env't Rsch.* 12 (2018).] Lead exposure also increases the likelihood of preterm births[Footnote 28: See Taylor et al., Adverse effects of maternal lead levels on birth outcomes in the ALSPAC study: A prospective birth cohort study, *British J. of Obstetrics and Gynecology* 322 (2014); Li et al., Maternal serum lead level during pregnancy is positively correlated with risk of preterm birth in a Chinese population, 227 *Env't Pollution* 227 484 (2017); Vigeh et al., Blood lead at currently acceptable levels may cause preterm labour, 68 *Occupational & Env't Med.* 231 (2011).] and fetuses that are small for their gestational age.[Footnote 29: See Taylor et al., Adverse effects of maternal lead levels on birth outcomes in the ALSPAC study: A prospective birth cohort study, *British J. of Obstetrics and Gynecology* 322 (2014); Li et al., Maternal serum lead level during pregnancy is positively correlated with risk of preterm birth in a Chinese population, 227 *Env't Pollution* 227 484 (2017); Vigeh et al., Blood lead at currently acceptable levels may cause preterm labour, 68 *Occupational & Env't Med.* 231 (2011).] Additionally, exceedingly low levels of lead can diminish male fertility and delay conception.[Footnote 30: See Buck Louis et al., Heavy metals and couple fecundity: The LIFE Study, 87 *Chemosphere* 1201 (2012).]

Lead is also a risk to the cardiovascular health of exposed adults. Cardiovascular effects such as hypertension and elevated blood pressure can occur at relatively low levels of lead exposure, causing great public health concern.[Footnote 31: ISA for Lead, supra note 23, at xciii.] Additionally, lead is a causal risk factor for coronary heart disease – the number one cause of death worldwide.[Footnote 32: Id. at 1-68.] A national study identified lead as the leading risk factor for deaths from coronary heart disease, accounting for 185,000 deaths every year.[Footnote 33: Lanphear Decl. ¶ 13; Lanphear et al., Low-level lead exposure and mortality in US adults: a population-based cohort study, 3 *Lancet Public Health* e177, e181 (2018).]

In addition to the well-documented health impacts of lead exposure to airport-adjacent communities, leaded avgas also puts airport workers at risk.[Footnote 34: NAS Report, supra note 11, at 60.] Though relatively little research has been done on the impacts of leaded avgas on airport workers, the proximity and duration of these workers to aircraft during takeoff – when nearly half of lead emissions from piston-engine aircraft occur[Footnote 35: See Endangerment Finding, 87 *Fed. Reg.* at 62761.] – suggest they face heightened risks of exposure. A peer-reviewed study of aircraft maintenance workers in Korea found that workers had significantly higher blood lead levels at air bases where leaded avgas was used compared to those where jet fuel was used.

Workers' blood lead levels also increased with time spent near runways where leaded avgas was used.[Footnote 36: Park et al., Blood Lead Level and Types of Aviation Fuel in Aircraft Maintenance Crew, 84 *Aviation, Space, & Env't. Med.* 1087, 1088-89 (2013).]

Comment Number: EPA-HQ-OAR-2022-0389-0240-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

Lead pollution is responsible for long lasting negative health effects including early dementia and heart disease. Since Dr. Lanphear's presentation LUNA has hosted 6 house meetings within the 1.5 miles radius of Reid Hillview airport.

During the house meetings, LUNA organizers continue to inform residents on what lead is, the effects of lead exposure, and how they can get their children tested for blood lead levels. The effects of lead exposure have been difficult to hear yet the community is not surprised.

One community member is an elderly person who frequently visits her primary care physician for severe arthritis and other health issues. She lives 0.4 miles from Reid Hillview Airport and knows her health issues are in relation to her proximity to lead exposure from the small aircrafts that fly over her home. According to this community member, she has six siblings none of whom live near an airport where small aircrafts operate and they have not experienced health issues to the degree she has.

A single mother of six who also lives 0.4 miles from Reid Hillview Airport, has children who attend a school adjacent to the airport, Donald J. Meyer Elementary School. The mother shared that she has asked the school to provide more tree coverage out in the children's playground to mitigate lead exposure from small aircrafts. She expressed to LUNA organizers how hurt she felt when the school told her they could not add tree coverage since this would impact the ongoing aviation coming from Reid Hillview. When the EPA is considering finalizing their findings, it is important to think of her children and their future.

Comment Number: EPA-HQ-OAR-2022-0389-0241-0002

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles, CA, Board of Supervisors

Excerpt Text:

Lead is a poison harmful to human health, and there is no safe level of lead in the blood. Lead exposure can cause anemia, high blood pressure, an increased risk of cancer, and, at high levels, death. Children are particularly susceptible to harm from low-level lead exposure, which can affect growth and cause behavioral problems and learning deficits. Many of lead's adverse effects on children are irreversible.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0003

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

Lead was removed from motor fuel nearly half a century ago because of its well-established adverse health consequences. The EPA, CDC, and World Health Organization all state that there is no safe level of lead in the blood and that lead poisoning is preventable.[Footnote 1: 1 Polanin, M. (2017) NCHR Comments to EPA on Use of Lead Free Pipes. National Center for Health Research.

<https://www.center4research.org/nchr-comments-epa/>] Research has shown that lead exposure may be linked to 18% of premature mortalities in the US, which is approximately 412,000 deaths.[Footnote 2: Lanphear, B., Rauch, S., Auinger, P., Allen, R., Hornung, R. (2018). Low-level lead exposure and

mortality in US adults: a population-based cohort study. *Lancet Glob Health*. 3:e177–e184.] Children, infants, and fetuses are particularly vulnerable to lead as their brains are not fully developed. Thus, smaller amounts of lead will have a greater effect prenatally and in childhood when compared to adults.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

Public health scholars have extensively documented the health hazards of lead exposure, especially for young children.

The health hazards of lead exposure are well-documented, especially for young children. The CDC has consistently affirmed the medical consensus that lead causes “damage to the brain and nervous system, slowed growth and development, learning and behavior problems, hearing and speech problems.”[Footnote 1: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>] The CDC has emphasized that “no safe blood lead level has been identified”, and for young children, lead levels as small as 10mg per deciliter of blood is concerning and can lead to serious long-term developmental problems.[Footnote 2: https://www.cdc.gov/biomonitoring/lead_factsheet.html] Exposure to lead among pregnant people can also lead to health impacts for the unborn child.[Footnote 3: Id.]

Comment Number: EPA-HQ-OAR-2022-0389-0247-0002

Commenter Type: Local Government

Commenter:

Organization: Winthrop Board of Health

Excerpt Text:

Our Board of Health appreciates that protecting children’s health and reducing lead exposure are two of EPA’s top priorities. As you state, the scientific evidence demonstrates that low levels of lead in children’s blood can have harmful effects on cognitive function in children, including reduced IQ and decreased academic performance. There is no evidence of a threshold below which there are no harmful effects on cognition in children from lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0258-0001

Commenter Type: State Elected Official

Commenter: Joan Lovely

Organization: Commonwealth of Massachusetts, Senate

Excerpt Text:

Over the last few decades, lead has been phased out of almost every single consumer product, including water, paint, and most gasoline. As a society, we have accepted the scientific evidence showing that lead is a toxic chemical, and the impacts of it accumulate over time and consistent exposure. Children exposed to lead suffer brain and central nervous system damage and suffer long-term cognitive effects. Adults exposed to lead can suffer high blood pressure, kidney damage, and issues with pregnancy, including miscarriage, stillbirth, premature birth, and low birthweight.

Comment Number: EPA-HQ-OAR-2022-0389-0263-0002

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles CA, Board of Supervisors

Excerpt Text:

Lead is a poison harmful to human health, and there is no safe level of lead in the blood. Lead exposure can cause anemia, high blood pressure, an increased risk of cancer, and, at high levels, death. Children are particularly susceptible to harm from low-level lead exposure, which can affect growth and cause behavioral problems and learning deficits. Many of lead's adverse effects on children are irreversible.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0010

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

i. Vulnerable Subpopulations

While the Proposed Endangerment Finding recognizes the unique harms lead has on children's health, EPA should expressly consider children as well as pregnant and breastfeeding people as "vulnerable subpopulations" especially at risk of harm from lead exposure under the endangerment-finding framework. Children are uniquely susceptible to harm from low-level lead exposure due to various physiological and behavioral attributes. Exposure starts even before birth; the developing fetus can be exposed to lead in utero, as lead in a pregnant person's body—either from recent exposure or from bone stores of lead that are mobilized during pregnancy—can cross the placenta, and lead has been measured in the fetal brain as early as thirteen weeks of gestation. [Footnote 58: CDC, Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women 30 (Nov. 2010), <https://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf>.] Prenatal lead exposure can affect a fetus's developing nervous system and result in decrements in mental development. [Footnote 59: Lead ISA at 1-75.] Neurotoxic effects of lead are generally not reversible, and effects stemming from prenatal exposures and early postnatal exposures can persist into adulthood. [Footnote 60: Id. at 1-77.]

Children also may face more exposures: They engage in age-appropriate behaviors such as crawling and increased hand-to-mouth contact that put them in closer contact with deposited lead, [Footnote 61: See id. at 1-11, 1-78.] and they breathe at faster rates than adults do, [Footnote 62: Lead and Your Health, Mich. Dept. of Health & Hum. Servs.: Mi Lead Safe, <https://www.michigan.gov/mileadsafe/learn/lead-and-your-health> (last visited Jan. 12, 2023) ("Children are most at risk [for lead exposure] because they . . . [b]reathe at faster rates when compared to adults.")] potentially exposing them to more airborne lead. Indeed, half of the children living in the United States under the age of six has detectable levels of lead in their blood. [Footnote 63: See Marissa Hauptman et al., Individual- and Community-Level Factors Associated with Detectable and Elevated Blood Lead Levels in U.S. Children: Results from a National Clinical Laboratory, 175 JAMA Pediatrics 1252 (2021), <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2784260>.] Once lead enters a child's body, it is more easily absorbed because the gastrointestinal tracts of children absorb ingested lead much more easily than those of adults. [Footnote 64: See Lead, Biomonitoring Summary, CDC, https://www.cdc.gov/biomonitoring/Lead_BiomonitoringSummary.html (last updated Apr. 7, 2017) ("Absorption of ingested lead can be as much as five times greater in children than adults and even greater when intakes of dietary minerals are deficient."); Int'l Agency for Rsch. on Cancer, WHO, Inorganic and Organic Lead Compounds, 87 IARC Monographs on the Evaluation of Carcinogenic Risks to Humans 1, 302 (2006) ("Lead Monographs"),

<https://monographs.iarc.fr/ENG/Monographs/vol87/mono87.pdf> (“[A] greater proportion of ingested lead is absorbed from the gastrointestinal tract of children than of adults.”).] More of the lead that enters the body gains access to the brains of children than that of adults, [Footnote 65: See Lead Monographs at 302.] and lead exposure affects the developmental processes children undergo. [Footnote 66: See Lead ISA at 4-127 (“[There is] well-characterized toxicological evidence for Pb exposure interfering with development of the brain and activity of neurochemical processes that mediate cognitive function”).]

No evidence of a threshold for the effects of lead on neurodevelopment has been reported, and there is evidence that the incremental harm associated with each unit increase in blood lead levels is actually worse in those children with lower blood lead levels relative to children with higher levels. [Footnote 67: Id. at 1-73.] EPA knows well the harm that lead poses to children—in its Proposed Endangerment Finding, it cites its prior determinations that, in children, there are causal or likely causal relationships between lead exposure and cognitive function, motor function, and auditory function decrements; attention problems; impulsivity; hyperactivity; conduct disorders; and internalizing behaviors, such as depression or anxiety symptoms and withdrawn behavior. [Footnote 68: 87 Fed. Reg. at 62,775–76 (citing Lead ISA at lxxxiii–lxxxvii).] EPA should consider this harm as harm to a “vulnerable subpopulation[] [that is] especially at risk” [Footnote 69: 74 Fed. Reg. at 66,506; 81 Fed. Reg. at 54,435.] in its final endangerment finding.

EPA should also consider the harms from lead exposure that are faced by pregnant and breastfeeding people. During pregnancy and breastfeeding, lead may be mobilized and redistributed from skeletal tissue and cause acute increases in blood lead levels in the pregnant or breastfeeding person. [Footnote 70: See Matthias L. Riess et al., Lead Poisoning in an Adult: Lead Mobilization by Pregnancy?, 22 J. Gen. Internal Med. 1212, 1213–14 (2007),

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2305731/pdf/11606_2007_Article_253.pdf.] This mobilization poses a risk not only to the fetus or baby but also to the parent with elevated blood lead levels, who is at an increased risk of adverse health effects, such as hypertension, from the newly mobilized lead. [Footnote 71: See id.; Stephen J. Rothenberg et al., Increases in Hypertension and Blood Pressure During Pregnancy with Increased Bone Lead Levels, 156 Am. J. Epidemiology 1079 (2002), <https://doi.org/10.1093/aje/kwf163>.]

Comment Number: EPA-HQ-OAR-2022_0389-0538-0001

Commenter Type: Private Citizen

Commenter: Noelle Roni

Organization:

Excerpt Text:

We know and you know that lead is highly toxic and does not degrade. There is no amount of safe lead to have in our system and no way to get it out once it is in. This is not new; the harms have been known for hundreds of years. Lead causes damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems, as well as cardiovascular health. As a result, we need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. It should not be only the communities who have the money and the "right" people being affected to make it happen. We do not need more studies or data - we need action to protect children, our health, and our environment now. Do the right thing. Make it about health, not money!

Comment Number: EPA-HQ-OAR-2022_0389-0448-0003

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, results in irrevocable negative neurological disruption and other damaging health issues. Lead exposure is responsible for serious illness in adults and children, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0415-0001

Commenter Type: Private Citizen

Commenter: Alyssa Alvarado

Organization:

Excerpt Text:

What I have read about leaded gasoline is that because of its widespread use the whole human population's intelligence decreased. Lead's negative affects on the brain and its development are apparent, as well as it causing other health problems as stated previously. There is no good reason as to why lead is still present in certain fuels when it's use in gasoline has been banned for most cars.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0007

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

There is no safe blood lead level in children. Even low levels of lead in blood have been shown to negatively effect a child's intelligence.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-007-0002

Commenter Type: Advocacy Organization

Commenter: Elaine Miller

Organization: Plane Sense 4 Long Island

Excerpt Text:

I am also the cofounder of Plain Sense for Long Island, we are located in Nassau County. We are a group of citizens, people, community representing our neighborhoods to protect them from the environmental harm and health effects of the low flying airplanes that we are subjected to on a daily basis. Let's start with some facts that everybody has been going over but let's reiterate them because you cannot deny them. So lead is a highly toxic and probable carcinogen causing health effects such as brain damage, learning disabilities, reduced fertility, nerve damage and death. Despite the dangers associated with it, many airplanes continue to utilize leaded fuel putting the health and safety of Americans, especially children at risk. Lead poisoning causes immense societal harm, such as brain damage, chronic illness, lowered IQ, elevated mortality. Lead exposure in childhood has been linked with violent crimes. Extremely high lead levels can lead to seizures, coma and death. Lower levels tend to cause less detectable harm but there is no safe level of lead. I just want to also make this statement because this is very important.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-009-0001

Commenter Type: Private Citizen

Commenter: Amalia Ponce

Organization:

Excerpt Text:

I have been living in this area for over 30 years. I am the mother of 5 children and the grandmother of a 2-year old. About a month ago, a doctor specializing in lead came here. He talked about the study of the airplanes using the airport that has been operation here for many years close to where I live. He talked about exposure to lead. Even though it was very important to learn all of this information, it is also concerning because we can have better habits but sometimes, we forget. It is striking to learn about all the causes resulting from lead and the defects.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-012-0001

Commenter Type: Academia

Commenter: Bruce Lanphear

Organization: Simon Fraser University, on behalf of the County of Santa Clara

Excerpt Text:

I am a physician and a scientist and over the past 25 years have studied how children are poisoned by lead in paint, air, house dust and water. I have also studied how lead damages children and adults. I have been fortunate to be involved in dozens of studies around the world and I was the consultant on the Reid-Hillview Airport study. Lead is a poison. We have known that for over two centuries. Most of my research over the past 25 years was to find out how much lead is too much. All 12 studies that examined the shape of the dose response relationship per lead including one that measured lead and bone found steeper detriments in IQ scores or academic abilities at the lowest level of lead in children's blood. We don't expect this to a degree of consistency in science but we would be foolish to ignore it. The population impacts of lead exposure on brain development including IQ deficits, diminished academic abilities and elevations in ADHD are lifelong. Even when IQ deficits are subtle for an individual child, they aren't trivial and the population impact is substantial. Aaron Rubin and his team found that children with higher blood lead concentrations were less likely to obtain the same social standing as their parents. Sheryl Magzamen found in a study in Milwaukee school children that lead exposure especially impacted children who already struggled with reading abilities. But lead doesn't only impact children, it's an established risk factor for preeclampsia and preterm birth, hypertension and coronary heart disease deaths. 15 studies conducted in Europe and the United States all found that lead was a risk factor for cardiovascular disease mortality. Using the NHANES follow-up study, we found that lead was the leading risk factor for coronary heart disease deaths in the United States accounting for 185 deaths every year. Airborne lead is an important source of lead exposure in the United States. A study by EPA scientists found that children's blood lead concentrations rose sharply at airborne lead concentrations below .15 microgram per cubic meter, the current air standard, and then decelerated at higher concentrations.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0003

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

First as the EPA's endangerment finding documents, exposure to lead air pollution indisputably harms the public health and welfare. The EPA has known for decades that exposure to airborne lead is a public

health crisis. Dr. Lanphear discussed the enduring damage of lead exposure particularly to the vulnerable and developing brains and bodies of children.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0007

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Lead exposure is responsible for the death of nearly half a million adults annually from cardiovascular disease and it causes irreversible damage to children's development. In the U.S. about half a million children who are four to five times more vulnerable to the impacts of lead have levels in their blood high enough to qualify as lead poisoning. The impacts of lead poisoning across all paths of exposure disproportionately fall on black, Latino and low-income communities. The same holds true for lead exposure caused by aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0005

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

The health risks associated with lead exposure are dire. There is no safe level of lead exposure. Even small amounts of lead can cause serious and permanent health effects in children including learning disabilities, behavioral disorders and hypertension. Adult lead exposure can cause cardiovascular effects and kidney disease. Chronic lead exposure is also associated with delayed pregnancy and decreased fertility. Once pregnant, mother's exposed to lead may experience increased risk of miscarriage and premature labor and may pass lead to the fetus interfering with brain development.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0001

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

As EPA Administrator Michael Regan remarked in the Preface to EPA Strategy to Reduce Lead Exposure and Disparities in U.S. Communities which was released last week, lead exposure can have devastating impacts to human health and can be especially harmful to developing children.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-017-0001

Commenter Type: Private Citizen

Commenter: Ernesto Barajas

Organization: Cassell Neighborhood Association

Excerpt Text:

My name is Ernesto Barajas. I am a member of the Cassel area. At the outset, I thank you for the opportunity to be able to share the experiences I have had together with my family in this neighborhood to

the East of San Jose for over 30 years. I believe the time has come to be heard please and get your help to shut down this airport. You are aware of all the damage that is causing to our health due to the fuel that the airplanes flying every day of the week, 7 days a week, 24 hours a day, use. Lead is more dangerous than poison because it is damaging our bodies, according to the doctors, and it is causing problems in our bones, in our brain and blood. My children, my grandchildren, and all my family have been exposed to this poison that is killing us. Additionally, there is the danger of an airplane crashing against our homes or a school at any time. We have 2 schools in a 2-mile radius from the airport. These children, parents, teachers fear that a plane may crash and end with our lives because many planes have crashed around in the neighborhood. Within four houses of where I live, a plane crashed years ago. The children are traumatized because when they hear the noise of a plane, they run, according to their parents, to hide under the bed out of fear that something may happen to them. I have grandchildren. They spend time indoors my house. They want to play in the yard. But we are afraid of air pollution. Four months ago, a land test was conducted, and my house had some of the highest results in the study. I hope you consider all our comments and hopes for our community. From the outset, I thank you all and hope you make a decision and that you are aware of what is happening in our community because of the Reid-Hillview airport. You are our hope for the future of our community, in particular our children who are the future not only of San José, but the world. Then I hope that the next time you bring us good news because you are the only ones who can help us close down the airport.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0005

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

We all know that lead is a potent neurotoxin that can cause irreversible and lifelong health effects and they bear repeating here. They cause significant impact in cognitive development of children including lowered IQ, mental disabilities and mood disorders, premature deaths, damage to people's kidneys, hearts and lungs and increase risk of heart disease.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0005

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

As you now, lead is a cumulative, neurotoxin and there is no safe level of exposure according to the World Health Organization, Center For Disease Control and American Academy of Pediatrics. Lead is especially toxic to children and unborn babies. Damages children's brains and nervous systems, lowers IQ scores, slows their growth and development, arms and muscle coordination, speech and language, causes behavior problems and these impacts are lifelong. Our kids matter. They must be protected, they must be the priority. Our youth live under this cloud of lead, they matter, their lives matter.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-033-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Agramont-Justiano

Organization:

Excerpt Text:

Hi, my name is Elizabeth Agramont-Justiniano, and I live in San Jose, I live in Santa Clara County, and I have heard many of the speakers kind of applaud the steps that our county has taken in terms of prohibiting the sale of leaded fuel. However, as currently stands 20 percent of the planes in operation at Reid-Hillview Airport still use leaded fuel, and as many of the speakers mentioned before there is no safe level of lead exposure in our bodies and lead is a toxic, lead is poisonous and there really is not a process for clean and cleansing the body of lead and it persists in the body for decades and augments folks risk for and especially children's risk for cancers, Alzheimer's, problems with the bones, problems with the heart and so it's not just a matter of banning leaded fuel but really making sure that there is no lead exposure of our community.

Comment Number: EPA-HQ-OAR-2022_0389-0407-0002

Commenter Type: Private Citizen

Commenter: David Pedersen

Organization:

Excerpt Text:

Indeed, the dangers of lead have been known for centuries, if not millennia; even the Roman Empire knew empirically about the dangers of lead (see e.g. https://penelope.uchicago.edu/~grout/encyclopaedia_romana/wine/leadpoisoning.html)!

Comment Number: EPA-HQ-OAR-2022_0389-0360-0001

Commenter Type: Private Citizen

Commenter: Craig Zarling

Organization:

Excerpt Text:

Medically speaking, there is no safe lead level in the body.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0002

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

Moreover, lead exposure also causes serious illness in adults, cancer and cardiovascular disease among them. Statistics about lead exposure, especially for young children, led this country to require removal of lead from gasoline many years ago. Somehow this vestige of older types of fuels has allowed that deleterious substance to remain in aviation fuel. So, statistics are important once again.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0002

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

It is the largest source of lead emissions in the country! As we all know by now, exposure to lead can have horrible health outcomes, and this is especially true for children. Lead exposure is likewise responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0324-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

For children/ pregnant women exposed to high levels of lead, it can cause developmental delays in babies and children as well as neurological changes due to lead being able to cross the placental barrier. Exposure to lead can also lead to anemia, weakness, and can even cause kidney and brain damage. According to the World Health Organization, there is no safe level of exposure to lead, demonstrating how important it is for the EPA to restrict and monitor the amount of lead emissions being released in the air.

Comment Number: EPA-HQ-OAR-2022_0389-0322-0001

Commenter Type: Private Citizen

Commenter: Cassandra Pierson

Organization:

Excerpt Text:

I am writing to you today to ask that you step up and protect children from the devastating effects of lead. You must finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in lifelong health issues and learning disabilities. In adults, it's responsible for many diseases including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022-0389-0181-0005

Commenter Type: Private Citizen

Commenter: Kerry McCarthy

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or avgas, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Banning avgas cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0311-0002

Commenter Type: Private Citizen

Commenter: Michael Scott

Organization:

Excerpt Text:

Moreover, research conducted since the original ban-much of it carried out at the University of Rochester, NY, where I am a member of the faculty-has revealed that safe levels of lead, especially for children, are much lower than once thought.

Comment Number: EPA-HQ-OAR-2022_0389-0284-0001

Commenter Type: Private Citizen

Commenter: Jody Benjamin

Organization:

Excerpt Text:

Did exposure to lead in childhood make some of us more likely to have autistic children? Why is there such a horrific increase in the numbers of autistic children with all the societal costs that brings? I don't even want to add the heartbreak it brings to their parents, siblings, grandparents. Did childhood exposure to lead make us dumber? As a society, it most certainly did. [FL TEXT REMOVED] Sincerely, Jody Benjamin Needham, MA 02492

Comment Number: EPA-HQ-OAR-2022_0389-0696-0005

Commenter Type: Private Citizen

Commenter: Mary Walker

Organization:

Excerpt Text:

I am writing in response to the Environmental Protection Agency's (EPA) Proposed Finding that Lead Emissions from Aircraft That Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare, published November 1, 2022. The Clean Air Act (CAA) is a federal law regulating air emissions from stationary and mobile sources. It aims to address public health and welfare risks that may emerge from said sources. Under the impression that this law works to protect the public, lead pollution from aircraft emissions must be investigated and analyzed to determine its impact and any future course of action after a conclusion has been reached. The Environmental Protection Agency (EPA) must work towards investigating the emissions of lead from aircrafts to benefit and protect the public. If lead is taken into the body, the effects are a cause for concern. Once it is taken in, it distributes throughout the body in the blood and is accumulated in the bones (Environmental Protection Agency, 2022). The effect is dependent on the level of exposure. Lead exposure can affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system (Environmental Protection Agency, 2022).

In children, their growing bodies make lead exposure an increased hazard due to the larger absorption occurring. Their brains and nervous systems are more sensitive as well. Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood (Environmental Protection Agency, 2022).

In order to fully understand the scope and effect lead emissions from aircrafts, the EPA must fully commit itself to investigating this concern. Throughout the entire United States, 40 million people live near major airports (Fisher, 2021). Lead is extremely toxic to humans and wildlife even at low doses. The health of airport workers, passengers, and communities around the airport depends on this decision. The most important step is to prevent lead exposure before it happens, which is why the EPA should investigate this potential public health concern.

Comment Number: EPA-HQ-OAR-2022_0389-0305-0002

Commenter Type: Private Citizen

Commenter: Dorie Reisenweber

Organization:

Excerpt Text:

We have long known exposure to lead harms people. That is why [FL TEXT REMOVED] It is responsible for serious illness in adults, including cancer and cardiovascular disease.

Every single day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Who would knowingly expose people to cancer and cardio-vascular disease? No one you say, yet that is what is happening to this day.

Comment Number: EPA-HQ-OAR-2022_0389-0308-0001

Commenter Type: Private Citizen

Commenter: Molly Niven

Organization:

Excerpt Text:

I am sure you are aware of how many children and adults exposed to lead pollution in air have contracted serious illness. And YOU have an opportunity to do something about this!

Comment Number: EPA-HQ-OAR-2022_0389-0407-0003

Commenter Type: Private Citizen

Commenter: David Pedersen

Organization:

Excerpt Text:

I concur with the Administrator's judgment that airborne lead (in this case from reciprocating piston engines used for aviation purposes) causes and contributes to air pollution that may be reasonably anticipated to endanger public health and welfare.

Indeed, the dangers of lead have been known for centuries, if not millennia; even the Roman Empire knew empirically about the dangers of lead (see e.g. https://penelope.uchicago.edu/~grout/encyclopaedia_romana/wine/leadpoisoning.html)! Like many air

pollutants, lead has no safe level; that is, there is no concentration below which health damage has not been observed (<https://pubmed.ncbi.nlm.nih.gov/27837574/>).

Comment Number: EPA-HQ-OAR-2022_0389-0684-0002

Commenter Type: Professional Association

Commenter:

Organization: Pennsylvania Chapter of the American Academy of Pediatrics

Excerpt Text:

As an air pollutant, lead is particularly toxic to children, because children are more vulnerable to air pollution due to their unique physiology and higher exposure to pollutants by body weight compared to adults (reference PMID: 34001642). As pediatricians, we know that removing a significant environmental source of lead would greatly benefit the health of children, especially for those who live near airports or areas where aircraft emit lead from their engines. Both short-term and long-term exposure to lead in the environment can lead to damage to the developing brain and nervous system, delays in growth and development, and problems with learning and behavior. There is no safe level of lead so identifying a source such as air pollution, which a child cannot reasonably escape on their own, and removing it through regulation is imperative. We need to clean up our air for the betterment of children's health and their future.

Comment Number: EPA-HQ-OAR-2022_0389-0686-0001

Commenter Type: Private Citizen

Commenter: Brian Gomez

Organization:

Excerpt Text:

There can be no question as to the harm that lead in fuels causes-this has been well proven through the years-and aviation gasoline has higher lead levels than any automotive gasoline has ever had. Please act to protect our children!

Comment Number: EPA-HQ-OAR-2022_0389-0741-0002

Commenter Type: Private Citizen

Commenter: Meghan Pierce

Organization:

Excerpt Text:

Lead pollution is a serious issue for Wisconsin communities, and there is no safe level of lead exposure. This is especially true for children who are at risk of developing lifelong health issues from lead pollution.

Comment Number: EPA-HQ-OAR-2022-0389-0134-0004

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Section IV (A): Scientific Basis of the Endangerment Finding

This Section of the Proposal carefully looks at the background information and previous findings

regarding lead as a pollutant– taking special consideration to the fact that it is a Criteria Pollutant in CAA laws. It carefully outlines many scientifically proven health effects, especially those that disproportionately affect children. This makes it clear that lead is already considered a public health endangerment in other forms of pollution, and emphasizes that it is a general health concern.

Comment Number: EPA-HQ-OAR-2022-0389-0140-0004

Commenter Type: Private Citizen

Commenter: Bernita Fruhling

Organization:

Excerpt Text:

There is no safe level of lead exposure in humans. Inhaling airborne lead from piston-engine aircraft emissions is one of the most dangerous ways to be exposed because it is absorbed so efficiently by the lungs and absorbed at nearly 100%. Airborne lead is particularly dangerous for children because children breathe at a faster rate than adults, and are therefore exposed to a greater dose than adults. There are many adverse health effects from lead exposure for both children and adults, which is cumulative, and can, for example, cause a permanent loss of IQ in children with developing brains. In order to protect the public health and welfare, I urge you to finalize this EPA proposal for a lead endangerment finding for leaded aviation gas in 2023 or sooner if possible.

Comment Number: EPA-HQ-OAR-2022-0389-0147-0002

Commenter Type: Private Citizen

Commenter: Elsa Keefe

Organization:

Excerpt Text:

The Environmental Protection Agency (EPA) must work towards investigating the emissions of lead from aircrafts to benefit and protect the public. If lead is taken into the body, the effects are a cause for concern. Once it is taken in, it distributes throughout the body in the blood and is accumulated in the bones (Environmental Protection Agency, 2022). The effect is dependent on the level of exposure. Lead exposure can affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system (Environmental Protection Agency, 2022). In children, their growing bodies make lead exposure an increased hazard due to the larger absorption occurring. Their brains and nervous systems are more sensitive as well.

Comment Number: EPA-HQ-OAR-2022-0389-0153-0004

Commenter Type: Private Citizen

Commenter: Kimberly Turner

Organization:

Excerpt Text:

Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process.

Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded

aviation gasoline now.

Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas.

It is unconscionable that EPA has failed to regulate the largest remaining single source of lead emissions to the air. Regulating lead aircraft gasoline is a major step in fulfilling the Biden-Harris administration's commitments to protect children's health and promote environmental justice.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0003

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

Throughout the rule proposal, the EPA examines why this ruling must be instated. It is apparent that living or working near lead-emitting sources does increase levels of lead in the bloodstream [Footnote 3: Federal Register/Vol. 87, No. 199/Monday, October 17, 2022/Proposed Rules pg. 62758]. Increased blood-lead levels have been found in people living near airports where lead emissions are likely to occur from aircraft operating on leaded fuels [Footnote 4: Ibid]. And thus, it stands to reason that, if heightened lead levels in the blood have negative health effects, then lead emissions pose a large threat for people that live near airports. The EPA has found a causal relationship between lead levels in the blood and deleterious health effects [Footnote 5: Ibid. pg. 62775]. In children, lead exposure has been found to cause decreased cognitive function, developmental defects, depression, anxiety, and many other injurious health outcomes [Footnote 6: Ibid]. In adult populations, lead exposure has been found to cause hypertension and other serious cardiovascular issues, as well as diminished cognitive function [Footnote 7: Ibid. pg. 62776]. This link between lead exposure and detrimental health effects helps prove that lead-emitting sources need to be regulated. The need for regulation of aircraft engines that use leaded fuels is even more apparent when we consider who is impacted by the lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0188-0002

Commenter Type: Private Citizen

Commenter: Blaine Ackley

Organization:

Excerpt Text:

-Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process.

Comment Number: EPA-HQ-OAR-2022-0389-0188-0004

Commenter Type: Private Citizen

Commenter: Blaine Ackley

Organization:

Excerpt Text:

-Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0007

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

The Environmental Protection Agency (EPA) began phasing out leaded gasoline for most uses in the United States in the 1970s. It was fully phased out by 1996, with a few exceptions: Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL), some industrial purposes, and National Association for Stock Car Auto Racing (NASCAR) races. The exception was made for NASCAR because, at that time, their cars could not sustain high-speed endurance races without leaded gas, plus the true scope & extent of danger from Tetraethyl Lead (TEL) were not fully disclosed or even discussed publicly then. Auto racing technology eventually advanced to the point where leaded gas wasn't needed anymore, and NASCAR voluntarily switched to unleaded gas in 2007.

The change created a unique environment for examining the impact of short-term Tetraethyl Lead (TEL) exposure. Unlike airports and industrial sites, where residents nearby are exposed more regularly to airborne Tetraethyl Lead (TEL), NASCAR tracks were only used periodically for racing events using leaded gas with Tetraethyl Lead (TEL).

“You don't have much other ambient Tetraethyl Lead (TEL) around these tracks. From a researcher's point of view, that offered a really nice experiment” researchers said. There is already a major body of research that shows connections between living around airports and industrial sites and health risks, and with reduced test scores among children. This paper suggests that even [bold: spending a few days or a week in one of these Tetraethyl Lead (TEL) poisoned areas may be enough to increase the risk of an adverse outcome if you are pregnant.]

-Airborne lead exposure: how much is harmful to health? (html) 09-30-2022 | BrandeisNOW | Brandeis University.

-Does short-term, airborne lead exposure during pregnancy affect birth outcomes? Quasi- experimental evidence from NASCAR's deleading policy (html) (pdf) 06-02-2022 – ScienceDirect.

-Does short-term, airborne lead exposure during pregnancy affect birth outcomes? Quasi- experimental evidence from NASCAR's deleading policy (html) – PubMed | National Library of Medicine (NLM) | National Institute of Health (NIH) | U.S. Department of Health & Human Services (HHS) | USA.gov.

-Conclusions: short-term exposure to airborne Tetraethyl Lead (TEL) during pregnancy adversely affects birth outcomes. Reducing even very brief exposure to airborne Tetraethyl Lead (TEL) during pregnancy may improve birth outcomes.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0008

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

A closely related study shows how ambient Tetraethyl Lead (TEL) exposure also impacts learning in elementary school by leveraging the same natural experiment where the same large national automotive

racing organization, National Association for Stock Car Auto Racing (NASCAR), switched from leaded to unleaded fuel.

-A Thousand Cuts: Cumulative Lead Exposure Reduces Academic Achievement (html) Alex Hollingsworth, Jiafang Mike Huang, Ivan Rudik, and Nicholas J. Sanders, October 7, 2022| Journal of Human Resources (JHR) | University of Wisconsin (UoW) Press. Supplementary Material, Appendix A (pdf).

-A Thousand Cuts: Cumulative Lead Exposure Reduces Academic Achievement (html) (pdf) Revised October 2022| National Bureau of Economic Research (NBER).

-SocArXiv Papers | A Thousand Cuts: Cumulative Lead Exposure Reduces Academic Achievement (html) (pdf) Last edited: September 08, 2022.

-EconStor: A Thousand Cuts: Cumulative Lead Exposure Reduces Academic Achievement (html) (pdf) Alex Hollingsworth, Mike Huang, Ivan Rudik, Nicholas J. Sanders 04-2022.

-Conclusions: the study found the [bold: same] [italics: short-term] exposure with increased levels and duration to airborne Tetraethyl Lead (TEL) negatively affect academic performance, shift the entire academic performance distribution, and negatively impact both younger and older children.

[bold: Key Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Research: Incompetence, Omission or Coverups Includes Michigan Department of Transportation (MDOT) and Airport Cooperative Research Program (ACRP) Promoted, Sponsored & Championed by the National Academies (NA) Sciences (NAS), Engineering (NAE), Medicine (NAM) | Transportation Research Board (TRB) | Transportation Research Board Cooperative Research Programs (TRBCRP)]

Comment Number: EPA-HQ-OAR-2022-0389-0199-0001

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

It is an honor for me to comment on Docket ID No. EPA-HQ-OAR-2022-0389 regarding the endangerment listing of leaded Avgas, and the elimination of the use of TEL additives in fuel. Combustion particles are linked to the use of lead additives in fuels of piston engine-powered engines (i.e., highway vehicles and small airplanes). Leaded fuels have a larger-than-expected impact on the lead exposure of the US population. The major lesson about lead exposure from the use of leaded fuels was demonstrated by the 20th-century experiment with the massive use of leaded gasoline in mogas. The evidence from that experience is extraordinarily strong and all people involved in environmental health and the policymakers who acquiesced to allow leaded fuel use should be aware that combustion particles of lead are extremely toxic to all breathing creatures. Children are especially vulnerable because they have a higher rate of inhalation and ingestion (i.e., food and legacy lead in the environment) than the adult members of society.

[Bold: Scientific evidence of the relationship between children's Pb exposure and the decline in lead additives to gasoline, 1975-1990.]Exposure consequences resulting from leaded gasoline were fully disclosed during its gradual phasedown (See EPA Fig in original attachment.). The rapid phasedown of Pb in 1985 and 1986 was an outcome of the Senate Hearing mentioned above. On behalf of the Minnesota Lead Coalition, my colleague Patrick L. Reagan and I submitted a comment to EPA supporting the rapid phasedown of leaded gasoline. The rapid phasedown was accompanied by a phenomenal decline in children's blood lead as noted in 1994 (Pirkle et al., 1994).

[Bold: Updates from 1984.] The science of the linkages between air lead, soil lead, and blood lead has been refined over the past 4 decades (see the for recent research studies on the topic).

According to the CDC and WHO, there is no known safe level of lead exposure. Children are especially vulnerable to exposure to the invisible lead exhaust of TEL in fuels, the legacy of settled lead dust in soil, and by children to multiple exposure pathways of lead (Mielke et al., 2021). Numerous studies have been conducted on these topics throughout the world (Mielke et al. 2019).

Comment Number: EPA-HQ-OAR-2022-0389-0209-0002

Commenter Type: Professional Association

Commenter:

Organization: American Academy of Pediatrics (AAP)

Excerpt Text:

On behalf of the American Academy of Pediatrics (AAP), a non-profit professional organization of 67,000 primary care pediatricians, pediatric medical sub-specialists, and pediatric surgical specialists dedicated to the health, safety and well-being of infants, children, adolescents, and young adults, I am writing to express our support for the “Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare” rule and to urge its adoption.

Despite progress in reducing lead exposure since the banning of leaded paint and gasoline, the risk continues from legacy contamination and niche continued uses of lead including in aviation fuel. These exposures and their deleterious effects disproportionately affect low- income and racial and ethnic minority communities.

The effects of lead on children are profound, and can result in long term behavior problems, attention deficit and reading disabilities, and failure to graduate from high school. Children exposed to lead also experience a host of other impairments to their developing cardiovascular, immune, and endocrine systems.

Studies show that once lead is ingested, it can settle in bone and remain in the body for years, depending on the length of exposure. Later experiences, including pregnancy, can cause the lead to leach from bone back into blood. Lead may cause harm even at levels of 5 mcg/dL., causing lower cognitive development and an array of neurological and behavioral problems.[Footnote i: “Lead Exposure Policy,” American Academy of Pediatrics, available at: <https://www.aap.org/en/patient-care/lead-exposure/lead-exposure-policy/>. For these reasons, prevention of exposure is critical to supporting healthy childhood development.]

Lead in aviation fuel poses a health risk to children and pregnant women living close to airports. Children are uniquely vulnerable to the lifelong and irreversible health effects lead can cause, and EPA has a critical role in preventing children’s exposure to lead. Accordingly, AAP supports this rule finding that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act. AAP also supports the finding that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.

AAP commends the EPA for this rule, especially Sections III.A and V of this rulemaking document, which properly reflect the scientific evidence that young children are vulnerable to a range of neurological effects resulting from exposure to lead. AAP appreciates the EPA’s recognition that low levels of lead in young children’s blood have been linked to adverse effects on intellect, concentration, and academic achievement, and that there is no evidence of a threshold below which there are no harmful effects on cognition from lead exposure. Adoption of this measure is one important piece of a comprehensive strategy to prevent lead exposure from all media, including paint, dust, soil, and water. We appreciate EPA’s continued commitment to that work and urge its continuation.

The AAP supports the proposed finding and urges adoption of the rule. Thank you for this opportunity to comment on the critical role EPA plays in addressing the health implications of lead and the risks children face from this public health issue.

Comment Number: EPA-HQ-OAR-2022-0389-0211-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Given the availability of FAA-approved unleaded fuels, lead from aircraft unnecessarily adds to the cumulative environmental exposure to lead, especially for children, from other sources like paint chips, contaminated dust, and contaminated drinking water. Lead has been banned from automobile gasoline for over 25 years, and it is past time to remove it from aircraft as well.

There is no safe level of lead exposure. Lead is particularly toxic in children, causing lifelong health effects. Childhood lead exposure impairs development of the nervous system leading to behavioral problems, learning disabilities, and reduced academic achievement.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

As I write this comment, poisoning of our children by general aviation planes continues at the rate of over 10 tons of lead emissions in the US every week. If you are going to put something in a population to keep people down for generations to come, it would be lead. Making sure that our children are safe is essential because when trust is exploited and standards for safeguarding our children fail, incalculable damage is caused with long-term effects on the lives of children, their families, and our communities. "We literally are using the blood of our children as detectors of Environmental Contamination" Dr. Hanna Attisha, Flint Water Crisis.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

I. Lead air pollution harms human health

As EPA repeatedly acknowledges in its proposed endangerment finding, lead air pollution poses a significant risk to human health. [Footnote 2: See, e.g., 87 Fed. Reg. 62,753, 62,757-58, 62,775-77 (Oct. 17, 2022); see also 75 Fed. Reg. 22,440, 22,447-52 (Apr. 28, 2010) (making similar findings over a decade ago).] Indeed, EPA listed lead as a "criteria air pollutant" under section 108 of the Clean Air Act [Italics: in 1976], after concluding that the pollutant "has an adverse effect on public health or welfare." [Footnote 3: 87 Fed. Reg. at 62,770; 75 Fed. Reg. at 22,444.] Lead air emissions can contribute to multiple pathways of human exposure and can remain a source of exposure for extended periods of time. [Footnote 4: EPA, Integrated Science Assessment for Lead 3-143 to 3-144 (2013),

https://ordspub.epa.gov/ords/eims/eimscomm.getfile?p_download_id=518908.] In addition to inhaling lead air particles directly, humans can ingest the particles after they settle into soil, dust, and surface water. [Footnote 5: L Id.; see also Marie Lynn Miranda et al., A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels, 119 *Env't Health Persp.* 1513, 1513 (2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3230438/pdf/ehp.1003231.pdf>.]

There is no safe level of lead exposure. [Footnote 6: Sammy Zahran et al., The Effect of Leaded Aviation Gasoline on Blood Lead in Children, 2 *J. Ass'n Env't & Res. Econ.* 575, 579 (2017), https://www.researchgate.net/profile/Sammy-Zahran/publication/316072809_The_Effect_of_Leaded_Aviation_Gasoline_on_Blood_Lead_in_Children/links/59eb7974aca272cddddef8b7/The-Effect-of-Leaded-Aviation-Gasoline-on-Blood-Lead-in-Children.pdf.] Even small amounts of lead can cause serious and permanent health effects in children, including learning disabilities, behavioral disorders, and hypertension. [Footnote 7: Id. at 575-76, 605; Nat'l Toxicology Program, U.S. Dep't of Health & Hum. Servs., NTP Monograph: Health Effects of Low-Level Lead xviii, xxi (2012), https://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealtheffectslowlevellead_newissn_508.pdf.]

Adult lead exposure can cause adverse cardiovascular effects and kidney disease. [Footnote 8: NTP Monograph, supra n.7, at xviii, xxii-xxiii.] Chronic lead exposure is also associated with delayed pregnancy and decreased fertility. [Footnote 9: Id. at xxiv.] Once pregnant, mothers exposed to lead may experience increased risks of miscarriage and premature labor, [Footnote 10: Id.; Victor H. Borja-Aburto et al., Blood Lead Levels Measured Prospectively and Risk of Spontaneous Abortion, 150 *Am. J. Epidemiology* 590, 593-97 (1999), <https://academic.oup.com/aje/article-pdf/150/6/590/218866/150-6-590.pdf>.] and may pass lead to the fetus, interfering with brain development. [Footnote 11: Borja-Aburto et al., supra n.10, at 590; Philip J. Landrigan, The Worldwide Problem of Lead in Petrol, 80 *Bull. World Health Org.* 768, 768 (2002), <https://scielosp.org/pdf/bwho/v80n10/8010a02.pdf>.] Dr. Bruce Lanphear, a board-certified physician and public health expert with a focus on lead exposure, recently testified that one gallon of lead-based gasoline translates to an estimated \$10 in downstream costs on children's lifetime earnings. [Footnote 12: Toxic Air: How Leaded Aviation Fuel Is Poisoning America's Children: Hearing Before the Subcommittee on Environment of the Committee on Oversight and Reform, 117th Cong. 17 (2022) (statement of Bruce P. Lanphear, MD, MPH), <https://docs.house.gov/meetings/GO/GO28/20220728/115056/HHRG-117-GO28-Transcript-20220728.pdf>.]

Comment Number: EPA-HQ-OAR-2022-0389-0223-0015

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

Indeed, the evidence supporting an endangerment finding for avgas has been clear for years. Friends of the Earth first petitioned EPA to make this endangerment finding in 2006. The implication of EPA's refusal to grant that petition or to take regulatory action on avgas—until now—has also been clear for years. There is no safe level of lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0229-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: 7 Directions of Service, The Alaska Center, et al.

Excerpt Text:

Any level of lead exposure is dangerous. As EPA well knows, there is no safe level of lead. Lead exposure, even at low levels, is associated with a range of serious health effects, including an increased risk of cancer; increased blood pressure; lower cognitive function; and harm to the nervous, cardiovascular, immune, and reproductive systems. At the lowest levels of lead exposure, adults face increased risks of death from cardiovascular disease, and children can suffer neurodevelopmental harm, leading to behavioral problems and learning difficulties. Many of the neurodevelopmental effects are believed to be irreversible and can lead to lifelong, devastating effects.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Communities across the country are still suffering from exposure to airborne lead pollution. Millions of people live nearby general aviation airports, making this a public health issue. There is no safe level of lead, any amount of lead in the bloodstream can cause adverse health effects, especially in children.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

Over many decades, lead has been found to be causal in neurodevelopmental detriment for multiple indicators including cognitive and academic performance (Lanphear et al. 2000), sensorimotor development (Dietrich, et al. 1985, Bellinger et al. 1991), behavior (Needleman, et al. 1996), and attention regulation (Davis, et al. 2004) for many populations. Moreover, scientists now recognize that lead does lasting harm to children even at extremely low exposure levels. In 2012, the National Toxicology Program concluded that adverse effects are apparent on academic achievement, IQ, attention-related behaviors, and behavioral problems at blood lead concentration below 5 [Micrograms]/dL.

Furthermore, there is growing evidence of effect modification in young BIPOC (Evans, et al. 2015, Amato, et al. 2013) and low-income children (Marshall, et al. 2020). This suggests that social conditions can worsen the impact of lead exposures.

In 2012, the Centers for Disease Control and Prevention (CDC) moved away from a “level of concern” for lead – which would imply a safe level below that, or that there exists a level of little to no concern - to a population-based guidance level in children that represents a sample of children at higher blood lead levels than the rest of the children in the nation. The population-based guidance level, referred to as “reference value,” was set at 5 [Micrograms]/dL in 2012 for the highest 2.5 percent of blood lead levels in children. This move was motivated by the fact that no safe level of lead has been found over decades of research and hundreds of scientific publications. The CDC further reduced the blood lead reference value to 3.5 [Micrograms]/dL in 2021 to reflect the populational trend over time (CDC, 2021). Therefore, it is urgent and necessary that EPA eliminate sources of environmental lead at every potential opportunity.

Restrictions and phasing out of lead in gasoline, paints, and other consumer products have resulted in blood lead concentrations in U.S. children decreasing; however lead exposure remains a major

preventable cause of neurodevelopmental morbidity. Protective environmental health policies remain necessary to prevent adverse impacts of lead exposure in the first place.

Neurodevelopmental harm is particularly concerning because of its intergenerational impact along the lifespan (Washington HA, 2019). Neurodevelopmental impacts hinder school success, job readiness, language transfer to children, and are associated with adjudicated delinquency, lost lifetime earnings, and many other life-altering impacts.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

In the past two years, the U.S. EPA has made cumulative impacts a priority in research, and framework development (U.S. EPA Cumulative Impacts: Recommendations for ORD Research, U.S. EPA Equity Action Plan). One aspect of cumulative impacts is the consideration of the release or emissions of other chemicals with similar health endpoints. Lead is a well-known cognitive and neurodevelopmental toxicant. Small engine aircraft also emit combustion related air pollutants, including fine particulate and polycyclic aromatic hydrocarbons. There is existing and growing evidence of combustion related air pollution as a neurodevelopmental toxicant (Payne-Sturges et al. 2019). There is evidence of associations between fine and ultra-fine particulate exposure and impairments in learning, memory, and impulsive-like behaviors (Allen et al. 2017, Cory-Slechta 2018, Zhang et al 2018). Polycyclic aromatic hydrocarbons have also been found to be associated with neurodevelopmental and cognitive harm (Perera FP et al. 2014).

Comment Number: EPA-HQ-OAR-2022-0389-0235-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Sierra Club

Excerpt Text:

The extreme and generally irreversible harm to public health and welfare from exposure to lead emissions, including from aircraft, has been documented and proven for decades, and is again amply documented in the Proposal; it is beyond doubt. Indeed, there is no threshold below which there are no harmful effects from lead exposure.[Footnote 1: Proposal, 87 Fed. Reg. at 62,755; see also, e.g., Centers for Disease Control and Prevention, Health Effects of Lead Exposure, available at <https://www.cdc.gov/nceh/lead/prevention/health-effects htm> (last visited Jan. 13, 2023).] Any further delay by EPA in protecting children from lifelong brain and nervous system damage would be unconscionable.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0002

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

A. Lead is harmful to human health.

It is well documented that lead pollution damages human health and the environment, so much so that the scientific consensus is there is no safe blood level in children.[Footnote 2: Centers for Disease Control and Prevention, Health Effects of Lead Exposure, <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>] Decades of research shows that lead exposure is associated with a wide range of adverse health conditions. Short-term and prolonged lead exposure can cause abdominal pain, constipation, irritability, memory loss, fatigue, nausea, and increase the risk of developing hypertension, heart disease, kidney disease, and infertility.[Footnote 3: Centers for Disease Control and Prevention, Lead, <https://www.cdc.gov/niosh/topics/lead/health.html>] Lead toxicity is also capable of damaging nearly every organ system in the human body.[Footnote 4: See EPA (2013), Integrated Science Assessment for Lead at section 1.6, <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=255721>; Agency for Toxic Substances and Disease Registry, What Are Possible Health Effects from Lead Exposure?, https://www.atsdr.cdc.gov/leadtoxicity/physiological_effects.html] These deleterious health effects are exacerbated by lead's ability to persist in the air, water, and soil for long periods of time and move from one environmental medium to another, creating multiple, cumulative exposure pathways.[Footnote 5: See 81 Fed. Reg. 71,906, 71,912-13 (Oct. 18, 2016); 81 Fed. Reg. 22,440, 22,447-48 (April 28, 2010).]

Babies, children under the age of five, and pregnant people are physiologically more sensitive to lead in the environment. For babies and young children, blood lead levels above two micrograms per deciliter (ug/dL) lead to poor neurocognitive and neurobehavioral effects, such as decreases in IQ, attention deficits, impulsivity and hyperactivity, and a predisposition to depression, anxiety, or high-risk behavior.[Footnote 6: See id.] Pregnant people and unborn children experience adverse effects at lower exposures levels than observed in children and other adults. Evidence shows lead exposure during pregnancy increases the odds of gestational hypertension, eclampsia and preeclampsia, renal insufficiency, spontaneous abortions, stillbirths, and miscarriages.[Footnote 7: Centers for Disease Control and Prevention, National Center for Environmental Health, and Agency for Toxic Substances and Disease Registry (2010), Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women at 5-12, <https://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf>] For a fetus, lead toxicity can impair growth, lower birth and post-natal weight, and delay neurodevelopment and puberty.[Footnote 8: Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention – Pregnant Women, <https://www.cdc.gov/nceh/lead/prevention/pregnant.htm>.] Due to the acute and chronic toxicity of lead on human health, it is essential that the federal government regulate the use of leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0257-0003

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

EPA's previous actions to eliminate lead in motor vehicle fuel have significantly improved public health. The City believes that elimination of lead in aviation fuel will build on that progress.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0012

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

EPA has known for decades that lead exposure, even at low levels, is dangerous to human health and the environment. [Footnote 81: See Air Quality Criteria at 1-7; 75 Fed. Reg. at 22,444 (explaining that, as part of the decision in 1976 to list lead as a criteria pollutant under the CAA, “EPA determined that lead was an air pollutant which, in the Administrator’s judgment, has an adverse effect on public health or welfare”).] Indeed, it “has long regulated emissions of lead air pollution due to their adverse impacts on public health.” [Footnote 82: 75 Fed. Reg. at 22,445.] EPA should heed the science it has reviewed in its Proposed Endangerment Finding and finalize its conclusion that lead air pollution may reasonably be anticipated to harm the public health or welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

A. Lead Air Pollution Endangers the Public Health and Welfare.

EPA proposes to find that lead air pollution may reasonably be anticipated to endanger the public health and welfare. [Footnote 45: See *id.* at 62,777 (“The Administrator proposes to find, for purposes of CAA section 231(a)(2)(A), that lead air pollution may reasonably be anticipated to endanger the public health and welfare.”). Petitioners agree that there is ample evidence to support the Administrator’s conclusion that lead air pollution may be reasonably anticipated to endanger both the public health and welfare but note that the Administrator need only find that such air pollution may reasonably be anticipated to endanger public health or welfare. See 42 U.S.C. (Section) 7571(a)(2)(A). That lead air pollution endangers both further supports the need to act promptly to finalize the finding.] This conclusion is compelled by decades of EPA’s findings and is supported by overwhelming scientific evidence. EPA must finalize this endangerment finding.

1. Public Health Effects

It is beyond dispute that lead is toxic, [Footnote 46: Even those representing the aircraft owners and pilots that use leaded avgas acknowledge that the additive tetraethyl lead is toxic. See *The Future of AVGAS 100LL and 100UL, Developments in the EU and the USA*, Int’l Council of Aircraft Owner & Pilot Ass’n’s Eur.: Monthly Enews (July 2022), <https://www.iaopa.eu/contentServlet/iaopa-europe-eneews-july-2022> (“First of all, we would like to make it clear that AOPA is critical of the continued use of Avgas 100LL. There is no question that the additive tetraethyl lead (TEL) is toxic. It is not for nothing that it was banned as an additive in automotive fuels over 40 years ago.”).] and EPA recognizes that there is no known safe level of lead. [Footnote 47: See 87 Fed. Reg. at 62,755 (“[A]s the EPA has previously noted ‘there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure.’” (alteration in original) (quoting EPA, EPA/600/R-10/075F, *Integrated Science Assessment for Lead lxxxvii–lxxxviii* (June 2013)); see also *id.* at 62,776.)] EPA has known for decades that lead harms human health: [Footnote 48: See EPA, EPA-600/8-77-017, *Air Quality Criteria for Lead 1-6 to -7* (Dec. 1977) (“Air Quality Criteria”), <https://nepis.epa.gov/Exe/ZyPDF.cgi/20013GWR.PDF?Dockey=20013GWR.PDF>; see also *Nat. Res. Def. Council, Inc. v. Train*, 545 F.2d 320, 324 (2d Cir. 1976) (“The EPA concedes that lead. . . has an adverse effect on public health and welfare”).]48 Lead exposure, even at low levels, is associated with a range of serious health effects, including an increased risk of cancer; increased blood pressure; lower cognitive function; harm to the nervous, cardiovascular, immune, and reproductive systems; and anxiety

and depression. [Footnote 49: See Agency for Toxic Substances and Disease Registry, Lead – ToxFAQs (Aug. 2020) <https://www.atsdr.cdc.gov/toxfaqs/tfacts13.pdf> (“ToxFAQs”); EPA, EPA/600/R-10/075F, Integrated Science Assessment for Lead lxxxiii–lxxiv (June 2013) (“Lead ISA”), <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=255721>; EPA, Lead Compounds (Sept. 2016), <https://www.epa.gov/sites/default/files/2016-09/documents/lead-compounds.pdf> (“EPA has considered lead to be a probable human carcinogen, and, under more recent assessment guidelines, it would likely be classified as likely to be carcinogenic to humans.” (citations omitted)).] At the lowest levels of lead exposure, adults face increased risks of death from cardiovascular disease, [Footnote 50: Lead ISA at xciii, lxxxiv, 1-68; see also Rajiv Chowdhury et al., Environmental Toxic Metal Contaminants and Risk of Cardiovascular Disease: Systematic Review and Meta-Analysis, 362 *BMJ* Article No. k3310 (2018), <https://doi.org/10.1136/bmj.k3310>.] with a recent large-scale study finding that 400,000 deaths per year—including hundreds of thousands of cardiovascular disease-related deaths—in the U.S. are attributable to adult lead exposure. [Footnote 51: See Bruce P. Lanphear et al., Low-level Lead Exposure and Mortality in US Adults: A Population-based Cohort Study, 3 *Lancet Pub. Health* e177 (2018), [https://doi.org/10.1016/S2468-2667\(18\)30025-2](https://doi.org/10.1016/S2468-2667(18)30025-2); see also Lauren Brown et al., Developing a Health Impact Model for Adult Lead Exposure and Cardiovascular Disease Mortality, 128 *Env’t Health Persp.* 097005-1 (2020), <https://doi.org/10.1289/EHP6552> (modeling the data from four epidemiological studies evaluating the impact of lead exposure on the risk of mortality from cardiovascular disease and finding central estimates of avoided cardiovascular disease deaths in 2014 based on the change in blood lead levels from 1999 to 2014 to range from roughly 34,000 to almost 99,000).] And at the lowest levels of lead exposure, children can suffer neurodevelopmental harm with irreversible effects.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0008

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

Lead is a well-known air pollutant that can lead to a variety of adverse health impacts, neurological effects that lead to behavioral problems. And exposure to airborne lead emissions before age six has demonstrated statistical relationship to violent behavior in adulthood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0003

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

Of course, it's not only children who are at risk, as we have heard, adults who are exposed to lead can experience cardiovascular disease and other conditions as well, and lower income in black and brown communities in particular are those that are often located near airports and so they are bearing the brunt of lead poisoning in the air. The research is completely clear. Leaded fuel poses a clear danger to communities nationwide.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-031-0002

Commenter Type: Private Citizen

Commenter: Kannan Thiruvengadam

Organization: Eastie Farm, Inc.

Excerpt Text:

I thought that this question about lead and the establishment of lead as a poison was already established and we have dealt with car fuels and we have dealt with paint, so I am really not sure why we haven't dealt with it in jet fuel and it seems like it should be a thing of the past, however it seems to continue. It endangers the public and it seems to me the government's job is to think about the long-term interest of the public. We appear to be pinned against short term economic interest but that can't be what the government stands for, the government has to think about long term interest of the public and leaded gas, like carbon and like various other toxins that we are fighting with may have some sort of short term economic advantage for a few people which has resulted in gross economic inequity in our country which has its own bad consequences as we hopefully learned during Covid but right now it is important to think about such deeper root causes of why we have things like lead still in -- still in the air that we breathe and it also does settle onto the soil where we grow our food and we will be absorbed by the plants that grow close to the ground and will also be breathe in by kids that may be playing in the soil. Lead is public endangerment and I think we already know that so I am at a loss as to why it hasn't been dealt with and the only explanation I keep coming back to is that there must be something that forces the government to act in a short-term economic interest. Economy is the first important and that helps everybody but the inequities that we have allowed to stand are why we have toxins to unacceptable levels continuing in very inequitable ways around our world.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0011

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

ii. Cumulative Impact of Lead from Numerous Sources

Second, EPA should expressly “consider the cumulative impact of lead from numerous sources, not just the fuels” at issue here, [Footnote 72: 81 Fed. Reg. at 54,436 (citing Ethyl Corp. v. EPA, 541 F.2d 1, 29–31 (D.C. Cir. 1976)).] as well as the multiple exposures to lead that individuals face. While EPA is correct in concluding that lead air pollution endangers public health and welfare, in its final endangerment finding, it should explain how the cumulative impact of lead from multiple sources informs this conclusion (and thus clarify how it considered the fourth principle guiding its analysis).

Lead is a cumulative toxin, and “[a]s lead exposure increases, the range and severity of symptoms and effects also increase.” [Footnote 73: Lead Poisoning, WHO: Newsroom (Aug. 23, 2019),

[https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-](https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.)

[health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.](https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.)]

People are not only exposed to lead air pollution from emissions from piston-engine aircraft operating on leaded avgas—they may be exposed to lead in air from paint, from historical deposits in the environment, from food sources, and from industrial facilities like battery recycling and metal processing facilities.

[Footnote 74: See 87 Fed. Reg. at 62,762; Lead Strategy at 6, 30, 35.] For example, and as explained above, ACAT’s constituents face exposure to lead from subsistence foods contaminated with lead from lead ammunition and lead fishing weights, from large-scale metals mining, and from contaminated drinking water. CEH works to address other sources of cumulative exposure to lead through, for example, lead in consumer products and canned foods. People may also be exposed to lead stores in their own bodies, as lead accumulates in teeth and bones and may then be released into the blood at a later time.

[Footnote 75: Lead Poisoning, WHO: Newsroom (Aug. 23, 2019), [https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-](https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.)

[health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.](https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20also%20causes%20long%2Dterm,birth%20and%20low%20birth%20weight.)]

Considering cumulative sources of lead exposure supports EPA's proposed conclusion that lead pollution may reasonably be anticipated to endanger public health and welfare, especially in light of the fact that adverse health effects increase in severity and number as exposure to lead increases.

Comment Number: EPA-HQ-OAR-2022_0389-0598-0001

Commenter Type: Private Citizen

Commenter: Sarah Roberts

Organization:

Excerpt Text:

We know that cutting lead out of gasoline was a huge improvement for our health. What can be more important than children, who are our future, and our health? We don't want future generations of Americans struggling with lead poisoning, or future generations of our great nation held back by huge percentages of residents with intellectual and health disabilities caused by lead exposure.

Comment Number: EPA-HQ-OAR-2022_0389-0417-0001

Commenter Type: Private Citizen

Commenter: Karin Hemmingsen

Organization:

Excerpt Text:

As a family physician who trained in Boston in the 1990's I witnessed the tragic effects of lead toxicity on inner city children and the suffering that so many had to experience to rid their bodies of toxic lead. At that time the "acceptable" level for lead was higher than it is now, meaning that there were likely many children in our state who suffered more subtle yet significant effects from environmental lead

Comment Number: EPA-HQ-OAR-2022-0389-0160-0002

Commenter Type: Private Citizen

Commenter: Olivia Zmarzly

Organization:

Excerpt Text:

Any amount of lead exposure in humans is incredibly dangerous, particularly in children as their brains are still developing. There would be a great benefit in a lead endangerment finding for leaded aviation gasoline, as it would protect our public welfare and make the switch from leaded to unleaded happen in a shorter time frame.

Comment Number: EPA-HQ-OAR-2022_0389-0534-0002

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

I strongly support the EPA proposal for a lead endangerment finding for leaded aviation gas. I work in care coordination for my local health department's Childhood Lead Poisoning Prevention Program and have witnessed firsthand the harmful, lasting impacts of lead on children's health. It is critical that we begin to shift from leaded aviation fuel if other safe options are available. With the increased

understanding of the harmful health impacts of lead, it would be not be ethical to continue intentionally putting lead into our environment. It is pertinent that we consider future generations and the health of our children. No person, or animal, deserves to suffer from lead poisoning due to breathing the air. Clean air is essential to health, and air pollution disproportionately impacts our most marginalized people. Not only does the lead get into the air we breathe, but it ends up settling into the soil in which our food is grown. Lead is toxic if inhaled or ingested, which we have known and banned the use of lead in other ways.

Comment Number: EPA-HQ-OAR-2022_0389-0642-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is a metallic compound that is toxic to the human body if exposed. The accumulation of lead in our bodies creates long-term health effects, especially in children. Children experience long-term consequences such as anemia, hypertension, behavioral problems, etc. Even a little bit of exposure can be detrimental to children. Approximately 1 million people die from lead exposure each year, and many suffer from the effects of lead. Ultimately this exposure can be controlled if we all do our part to eliminate these emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0213-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

Young children are particularly susceptible to the health effects of lead “because their bodies are still developing and growing rapidly” and because of behaviors that increase exposure, such as putting “their hands or other objects, which may be contaminated with lead dust, into their mouths.”[Footnote 3: Centers for Disease Control Childhood Lead Poisoning Prevention website, Health Effects of Lead Exposure page, accessed December 20, 2022] However, a recent study of adults age 65 and older in North Carolina for the years 2000-2017 “found higher rates of cardiovascular mortality within a few kilometers downwind of single- and multi-runway airports, though these results are not always statistically significant.”

The study also “found significantly higher cardiovascular mortality rates within a few kilometers and downwind of single-runway airports in years with more piston-engine air traffic.”[Footnote 4: Klemick, H.; Guignet, D.; Bui, L.T.; Shadbegian, R.; Milani, C. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. *Int J Environ Res Public Health*. 2022 May 13;19(10):5941. doi: 10.3390/ijerph19105941. [https://pubmed.ncbi.nlm.nih.gov/35627477/.](https://pubmed.ncbi.nlm.nih.gov/35627477/)]

Comment Number: EPA-HQ-OAR-2022-0389-0233-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

Project TENDR has previously advocated for [Footnote 1: Project TENDR letter in support of lowering CDC Blood Lead Reference Value, https://projecttendr.com/wp-content/uploads/2021/10/Project-TENDR-letter_CDC_BLR-8.2.21.pdf; Project TENDR peer-reviewed Consensus Statement, <https://ehp.niehs.nih.gov/doi/10.1289/ehp358>; Project TENDR scientists' publication "Establishing and Achieving National Goals for Preventing Lead Toxicity and Exposure in Children", <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2627572>] protection of populations from exposure to lead, most recently in their letter to the CDC supporting a lower guidance level of lead. This step by the U.S. EPA is a necessary step towards prevention of children's lead exposure to reduce the ills that lead causes. There has been no safe level of lead exposure found; exposure to even a small amount of lead threatens the developing brain. Reducing this source of lead will further a critical goal of achieving public health and reducing exposure and health disparities in BIPOC and low-income communities that are disproportionately exposed to lead.

Comment Number: EPA-HQ-OAR-2022-0389-0181-0005

Commenter Type: Private Citizen

Commenter: Kerry McCarthy

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or avgas, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Banning avgas cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0449-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

It is long overdue for EPA to take a holistic approach to protect children and communities from lead exposure, such as by updating its outdated standards for lead in household paint and soil, and by regulating the largest source of lead emissions into the air, aviation gasoline. If EPA takes seriously its commitment to public health and environmental justice, the agency must end the use of leaded aviation gasoline now. Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to

human health. It is high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air. Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process. Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded aviation gasoline now. Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas. It is unconscionable that EPA has failed to regulate the largest remaining single source of lead emissions to the air. Regulating lead aircraft gasoline is a major step in fulfilling the Biden-Harris administration's commitments to protect children's health and promote environmental justice.

Comment Number: EPA-HQ-OAR-2022_0389-0463-0001

Commenter Type: Private Citizen

Commenter: Thomas Filardo

Organization:

Excerpt Text:

Dear Secretary Michael Regan, Over five decades of Family Practice and emergency medicine work, I have seen the mentally-crippling effects of lead poisoning in children and young (mostly) adults, a societal burden disproportionately afflicting the minority and poor echelons of our currently sad society, a situation for which you hold unique powers to curtail for the future of all of us. Please, please!, finalize an endangerment finding for leaded aviation gasoline to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0473-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I strongly support the EPA proposal for a lead endangerment finding for leaded aviation gas. Lead was banned from auto gas more than 25 years ago, and lead in piston-engine aircraft fuel should also be banned immediately. If there is a safe, unleaded aviation gas alternative(s) that currently exists, why aren't we using it?

Comment Number: EPA-HQ-OAR-2022_0389-0473-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

In order to protect the public health and welfare, I urge you to finalize this EPA proposal for a lead endangerment finding for leaded aviation gas in 2023 or sooner if possible. Thank you.

Comment Number: EPA-HQ-OAR-2022_0389-0500-0003

Commenter Type: Private Citizen

Commenter: Carla Campbell

Organization:

Excerpt Text:

Therefore, I am in agreement that lead emissions constitute an endangerment to the public's health. Please do everything in your power to decrease this exposure to lead emissions from aviation.

Comment Number: EPA-HQ-OAR-2022_0389-0534-0004

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

How can we expect parents, medical professionals, and others to believe the silent, harmful health impacts of lead, when our government allows leaded aviation fuel to be used in over 20,000 airports across the United States? There are many adverse health effects from lead exposure for both children and adults, which is cumulative, and impacts our society in many ways including loss of IQ, increased medical costs, and premature death due to the lasting impacts of lead. In an effort to protect the public's health, and aim towards environmental justice, I urge you to finalize this EPA proposal for lead endangerment finding for leaded aviation gas as soon as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0675-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Montgomery County Quiet Skies Coalition, Ltd.

Excerpt Text:

This Proposed Finding is important. If anything, it is long overdue. Lead is highly toxic and does not degrade. The harms have been known for hundreds of years. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems, and harms adult cardiovascular health. No level of lead exposure is safe. It definitely "endangers public health and welfare." We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public.

Comment Number: EPA-HQ-OAR-2022_0389-0635-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I fully support the EPA's decision to finalize an endangerment finding for leading aviation gasoline and to adopt rules eliminating its use. Avgas is a known toxic substance that poses a significant risk to human health and the environment. Its continued use as the primary fuel for small aircrafts is a major source of lead emissions in the country, contributing to air pollution and negative health effects such as brain damage, developmental delays and cancer. The elimination of avgas is a necessary step in protecting public health and ensuring a cleaner and healthier environment for future generations. The use of

unleaded fuels, such as GAMI, is a viable alternative that has been proven to be safe and effective for small aircrafts. Furthermore, the adoption of rules eliminating avgas would also align with global efforts to reduce lead emissions and promote sustainable aviation. Other countries have already phased out the use of leaded avgas and it is time for the US to catch up and take action. In addition, the use of unleaded fuels can also bring economic benefits for small aircrafts owners and operators, as unleaded fuels are typically cheaper and more widely available than avgas. In conclusion, finalizing an endangerment finding for leading aviation gasoline and adopting rules eliminating its use is a crucial step in protecting public health and the environment. I strongly support the EPA's decision and urge for its swift implementation.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0003

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

The Environmental Protection Agency must take timely action to protect the hundreds of thousands of children being exposed to airborne lead daily-increasing the likelihood of detrimental health impacts, including nervous system disorders and learning disabilities. The impact of lead on public health, especially our children's health, has gone on way too long. The Environmental Protection Agency must find that lead emissions from general aviation aircraft endangers public health and welfare and initiate a rulemaking to eliminate lead from general aviation as soon as possible. There is no safe level of lead exposure, and it is long past time to address the lead emitted from small aircraft.

Comment Number: EPA-HQ-OAR-2022_0389-0698-0001

Commenter Type: Advocacy Organization

Commenter: Annakaren Ramirez

Organization: Pacoima Beautiful

Excerpt Text:

I support the EPA's rulemaking in compliance with published requirements, to eliminate lead from aviation gasoline and supporting EPA's endangerment finding on leaded aviation gasoline. Our community has been burdened for decades by the impact of leaded aviation fuel, specifically from the whiteman airport in Pacoima. The private airplanes that operate out of Whiteman airport use leaded aviation fuel and the airport itself stores and sells leaded aviation fuel. There is no safe level of lead exposure. Even small amounts of lead can cause serious and permanent health effects, particularly in children. Studies show that millions of people live close to general aviation airports and are exposed to lead emissions from piston-engine aircraft on a daily basis. This is an environmental justice and public health crisis.

Comment Number: EPA-HQ-OAR-2022_0389-0757-0001

Commenter Type: Private Citizen

Commenter: Brandon Bowersox-Johnson

Organization:

Excerpt Text:

I want my son and his generation to grow up with clean air and water. BUT in my state, 8 of the top 10 lead pollution sources are airports. Leaded avgas has a drop-in replacement, and the EPA needs to push

even harder to accelerate the switch to unleaded aviation fuels. Do it for my son and all our children everywhere. Please finalize the endangerment finding for leaded aviation gasoline and accelerate your time-table to adopt rules eliminating the use of leaded aviation gasoline, or "avgas". It's the largest source of lead emissions in the country! No level of lead is safe for children and humans.

Comment Number: EPA-HQ-OAR-2022-0389-0143-0001

Commenter Type: Private Citizen

Commenter: Sandy Zelasko

Organization:

Excerpt Text:

Lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Due to the devastating and potentially irrevocable adverse impacts caused by lead exposure, I urge the EPA to issue an endangerment finding on this toxic fuel as quickly as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0161-0003

Commenter Type: Private Citizen

Commenter: Maggie Glenn

Organization:

Excerpt Text:

I would like to see this proposed rule of the EPA go through and would like to understand how the lead emissions impact human health. I think these findings can push for a better future, benefitting both the health for humans and the environment.

Comment Number: EPA-HQ-OAR-2022-0389-0174-0002

Commenter Type: Private Citizen

Commenter: Glen Anderson

Organization:

Excerpt Text:

ESPECIALLY AT RISK are children, people of color, pregnant mothers, newborns, unborn fetuses, and low-income people. IF YOU CARE ABOUT THEM YOU WILL SHARPLY REDUCE AIRPLANE POLLUTION!!!!

The EPA reports that approximately 5.2 million people live within 500 meters of an airport runway, 363,000 of whom are children age five and under. The EPA also estimates that "573 schools attended by 163,000 children in kindergarten through twelfth grade are within 500 meters of an airport runway." Millions more are at risk by virtue of living within 1000 to 1500 meters of airport runways. Others are

subjected to multiple daily dustings of this toxin from repetitive flight training activity.

Many studies have found children living near airports have dangerously high amounts of lead in their blood. DO YOU CARE ABOUT CHILDREN OR NOT????? Would you want YOUR OWN CHILDREN to suffer? If not, then PLEASE DO NOT MAKE OTHER CHILDREN SUFFER!!!!

The FAA has known about this problem FOR DECADES -- BUT KEEPS FAILING TO TAKE NECESSARY ACTIONS!!!! THIS IS A SCANDAL!!!!

LOCAL GOVERNMENTS MUST BE EMPOWERED TO TAKE ACTIONS TO PROTECT THE HEALTH OF LOCAL PEOPLE, since the FAA has become corrupted and failed to do its job!!!!

I STRONGLY URGE THE ENVIRONMENTAL PROTECTION AGENCY to issue an endangerment finding on this toxic fuel as quickly as possible!!!!

Comment Number: EPA-HQ-OAR-2022-0389-0178-0001

Commenter Type: Local Government

Commenter:

Organization: Town of Middleton-Wisconsin

Excerpt Text:

The Town of Middleton, Wisconsin is a co-petitioner on the EarthJustice Petition for this matter, and strongly supports the EPA making a final positive lead endangerment finding for leaded aviation gas as soon as possible, especially in light of the FAA's 9/1/22 approval of GAMI's high octane unleaded aviation gas.

Comment Number: EPA-HQ-OAR-2022-0389-0179-0001

Commenter Type: Local Government

Commenter:

Organization: Town of Middleton, Wisconsin

Excerpt Text:

The Town of Middleton, Wisconsin is a co-petitioner on the EarthJustice Petition for this matter, and strongly supports the EPA making a final positive lead endangerment finding for leaded aviation gas as soon as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0001

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

I am writing to express my support for the findings that lead emissions from aircraft engines are dangerous for society, and I hope to see that these findings are approved. I believe there are many merits to this decision, and, while I know this proposal would not directly regulate aircraft lead emissions, I believe that it is necessary to take the steps toward lead regulation.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0002

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

This proposed rule, which will find that lead emissions from specific aircraft engines are dangerous to public health and welfare, is a strong first step to reaching a just city and an equitable society. I would be hard-pressed to say that I am a chemist or have expertise in a field that could help me describe the exact processes that lead goes through when it enters into someone's bloodstream, but the ill effects that lead has on public health and welfare are clear. It does not take a chemist to read the EPA's proposed rule (and the reasoning behind it) and recognize the harms that lead poses to people's health and how much aircraft engines that use leaded fuel contribute to air pollution. The proposal very clearly lays out why we must find that aircraft engines that operate on leaded fuels do cause air pollution and that they pose a danger to public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0192-0001

Commenter Type: Private Citizen

Commenter: Betsy True

Organization:

Excerpt Text:

I strongly support the US EPA Proposed Lead Endangerment Finding for Leaded Aviation Gas. The FAA needs to ban lead in aviation gas to protect children and public health. Exposure to lead, especially breathable airborne lead that is nearly 100% absorbed, is particularly dangerous. This is something that should have been done many years ago. It is time to do something about it.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0027

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[**Bold: Summary: Eliminate Negative Aviation Impacts (NAIs): Finalize Endangerment Finding & Enact Complete Ban of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)**]

There is truly a proven need for the small percentage of real airports with real aircraft that actually provide real demonstrable transportation needs, real jobs and real tax revenues, many others are simply self-perpetuating personal hobby, sport, recreational entertainment social venues cleverly protected & mostly hidden by the world's largest groups of Special Interests & Industry Lobbyists amongst overall aviation statistics that enable increased non-essential aircraft, including helicopter take-offs, landings, accidents & crashes, regularly flying aircraft with improperly configured or broken, tampered with or disabled ADS-B coupled with "disturbing the peace" and "public nuisance" revenge fly-bys intended to bully, harass and intimidate providing Communities utterly ZERO Socially Redeeming Values (SRVs) including unnecessary Negative Aviation Impacts (NAIs):

- Adverse Health, Safety and Welfare impacts
- Environmental impacts of toxic pollution & noise pollution
- Diminished quality of life

- Reduced Community desirability & property valuation
- Wasted taxpayer money

The American Public deserves truth, protection, accountability and justice provided by action, answers and comprehensive information including environmental and public health impacts, rather than continued myopic, self-serving and unquestioned Aviation Industry, Special Interest and Industry Lobbyist Propaganda, influence peddling and artificial delays.

The Scientific and Medical Facts regarding Negative Aviation Impacts (NAIs) are simply NOT debatable:

- NO safe level of lead in a child's blood with adverse irreversible impacts, even small amounts contribute to an elevated risk of IQ loss, ADHD / Autism, juvenile delinquency, impulse control, developmental delay, learning and behavior problems, increased violence, etc.
- Newborns exposed to lead can experience premature birth, low birthweight, slowed growth, etc.
- Adults exposed to lead are at greater risk of cancer, coronary heart disease, premature death, high blood pressure, strokes, kidney disease, reduced fertility, reproductive problems, childbirth birthing delivery problems miscarriages, etc.
- Aviation noise can interfere with reading comprehension, cognitive functioning, sleep disturbances and many other related health problems, etc.

It's time to stop living in the past as a crutch to protect current investments in outdated toxic, dangerous aircraft & practices once and for all. Seems like true "Multiple Conflicts of Interest" from the "Gate Keepers" on many levels across the Aviation Industry, Special Interests & Industry Lobbyists.

Piston-Engine Aircraft (PEA) including Piston-Engine Helicopters, collectively AKA Flying Junk Piles (FJPs), have an [bold: average age of 50 years old]! Taxpayers don't care about personal 1930s & 1940s Piper Cubs, 1950s Aeroncas, 1960s Mooneys, 1970s Cessnas or Pipers, 1980s Beechcraft Bonanzas, home garage (clown) built Experimental Amateur Built (E-AB), WWI or WWII Bombers, Bell 47s, Robinson R22s or Sikorsky H34s, museum pieces, collectors' items or other flying toys for the wealthy, and certainly NOT for any FJPs that cannot utilize existing Unleaded Fuels.

50 year old Flying Junk Piles (FJPs) have [bold: absolutely nothing] to do with the [bold: future of anything]!!!!

Time to [bold: RETIRE] 1/3 of the so-called General Aviation (GA) "Fleet" of personal hobby, sport, recreational entertainment social Flying Junk Piles (FJPs) that cannot utilize existing Unleaded Fuels and remove Associated "Government Handouts, Entitlements and Grant Assurance Obligations" from associated personal hobby, sport, recreational entertainment social venues / airstrips / facilities / infrastructure.

These are [bold: NOT] taxpayer problems and should [bold: NOT] utilize [bold: ANY] taxpayer money at all. Certainly, no more support than Hunting, Fishing, Boating, Golf, Bowling, National Parks & Camp Grounds or other personal hobby sport recreational social entertainment venues or pursuits receive.

[Bold: Taxpayers Saddled with Thousands of Unnecessary Non-Essential Hobby, Sport, Recreational Entertainment Social Venues That Are NOT Taxpayer Problems That Are Sources of Negative Aviation Impacts (NAIs) Shamelessly Bloating the United States (US) Tax Burden with ZERO ROI]

[Image of United States showing general aviation airports in the US national airport system]

General Aviation (GA) airports & airstrips in the Tragically Out-of-Date, Out-of-Touch United States (US) National Plan of Integrated Airport Systems (NPIAS). Small public airports & airstrips with few or no scheduled passenger flights. NOTE: FAA classified 2,903 airports, 10 heliports, and 39 seaplane bases largely serving General Aviation (GA) eligible for federal support AKA "Aviation Welfare" via Airports Capital Improvement Plan (ACIP) AKA "Government Handouts". More than 13,100 airports & airstrips, many little more than tiny parcels of mostly private properties with a clear grass area, serve piston- engine aircraft (PEA) including piston-engine helicopters (PEH) nationwide. Clearly the Root & Source of

Negative Aviation Impact (NAIs) Protected Fiefdoms across the United States are [bold: NOT] Taxpayer problems at all!

Executive Summary, Conclusion & Taxpayer Demands

Millions of Taxpayers deserve Accountability, Justice and Protection from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Involuntary Poisoning” violating individual “Bodily Integrity” rights protected by the United States Constitution including vulnerable populations such as pregnant moms, babies, school children & elderly and DEMAND:

- Immediate Full Endangerment Finding for Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)
- Immediate Ban on Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)
- Immediate Distribution of Multiple Existing Unleaded Aviation Fuel’s including Mogas per National Aeronautics and Space Administration (NASA) Regional Air Mobility (RAM) Blueprint with Back to Basics "Targeted Investments" at an enormous number of readily available Local Municipal, County, State or Federally owned Commercial Grade Federal Aviation Administration (FAA) Towered facilities Across Entire United States
- Remedy & Right-size ridiculous ancient phony Federal Aviation Administration (FAA) justifications / ROI calculations, Budgeting and Bloated “Government Handouts” AKA “Aviation Welfare” AKA Airports Capital Improvement Plan (ACIP)
- Terminate & Right-size outrageous Subjective Monopolistic Protectionist Arbitrary Federal Aviation Administration (FAA) manufactured Bureaucratic Grant Assurance Obligations, harmful Protections & Red Tape
- Remove & Right-size ANY Federal Support and or subsidies and or “Government Handouts” AKA “Aviation Welfare” for non-essential & un-needed Personal Hobby Sport Recreational Social Entertainment Venues & Privately Owned Commercial Businesses
- Enact Federal MANDATES with stringent requirements eliminating Loopholes and “Multiple Conflict(s) of Interest” on Federal Aviation Administration (FAA) to expedite the process of eliminating Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Once and for All”
- Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Evaluate, Verify and Validate Medical Implications of Long-Term Exposure to Unleaded Aviation Fuels with Proprietary Unleaded Chemical Compositions (PUCCs)
- Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Implement 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Contamination Abatement, Remediation, Cleanup, Removal, Disposal Best Practices, Protocols & Knowledge Base
- Extricate RAMPANT Special Interest & Industry Lobbyist Pariah Political Agendas, Multiple Conflicts of Interest, Mis-Information, Dis-Information, Propaganda & Influence Peddling
- Enact Federally MANDATED U.S. Government Accountability (GAO) Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Transition Investigation

Comment Number: EPA-HQ-OAR-2022-0389-0194-0004

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

To reasonable people almost six decades of indifference, inaction, acquiescence, artificial delays, excuses, hype, dis / mis information, lobbying, influence peddling, propaganda, bullying, threats, intimidation and outright lies absolutely defy contemporary comprehension illustrating the complete total disregard, and utter lack of any real progress totally devoid of any demonstrable effort to truly “Protect Anyone” from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) anywhere in the United States. Six

decades of “Reasonable Anticipation that Public Health and Welfare certainly ARE & HAVE BEEN Endangered”!

Almost 60 Years, Six decades of duping the American Public with Special Interest, Industry Lobbyist gibberish, double-talk and non-sense coupled with protection & impunity provided courtesy of “Burrowed In” Local, County, State & Federal Government Department employees laden with glaring, open, obvious multiple conflicts of interest, including the Civil Air Patrol (CAP) and the Federal Aviation Administration (FAA).

The 2022 / 2023 timeframe seems way past time, long overdue, to exercise fair, appropriate, practical common sense to warrant an Immediate EPA “Endangerment Finding” and “Complete Ban” of Leaded Aviation Gasoline (Avgas) AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene Dibromide (EDB) to protect ALL American citizens from “Involuntary Poisoning” whose “Bodily Integrity” rights are protected by the United States Constitution!

Comment Number: EPA-HQ-OAR-2022-0389-0207-0003

Commenter Type: Private Citizen

Commenter: Wisconsin Ecolatinos

Organization:

Excerpt Text:

The use of Leaded aviation fuel in Middleton Municipal Airport contaminates the air with Lead, a neurotoxic substance, threatening the health and well-being of Middleton residents, especially our children. Therefore, we respectfully ask the EPA to declare the use of leaded aviation gas a danger to the health and welfare of the public.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0008

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

We understand that this docket does not propose to change any emissions standards or set new regulations, but we see this finding as a step in the right direction toward remedying these issues. We are also aware that the cost is high in creating new aircraft fuels and reengineering aircraft engines to accommodate new fuels. However, given lead’s significant impact on neurological and environmental health as evidenced in this docket by many health and environmental professionals, the real costs of the toxic effects of lead should not be ignored, and must continue to be addressed. Lead has a significant impact on the Band due to the proximity to the local airport of two schools with young children; the treaty hunting, fishing, and gathering rights that the Band holds; and due to the impact that lead deposits have on agricultural and soil health as well as associated natural resources the Band relies upon. The Band also recognizes and commends the excellent work that has led to the remarkable reductions in lead exposure over the past several decades in the United States, and hopes that success can continue, as current and future generations will be positively impacted by work done to reduce lead emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0014

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

First and foremost, I very much appreciate EPA’s proposal on this urgent public health and welfare concern that lead particulate emissions from leaded aviation gas used in piston-engine aircraft can reasonably be anticipated to endanger public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0013

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

IV. An endangerment finding for avgas is warranted

EPA’s notice of proposed rulemaking, and its underlying evidence, plainly establishes that avgas “causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare.” [Footnote 37: 42 U.S.C. (Section) 7571(a)(2)(A).] Accordingly, an endangerment finding for avgas is both necessary and justified.

We broadly agree with the legal framework laid out in EPA’s proposal. To make an endangerment finding, EPA must address two inquiries: (1) whether lead air pollution “may reasonably be anticipated to endanger public health or welfare,” and (2) whether emissions “from any class or classes of aircraft engines . . . causes, or contributes to” that lead air pollution.[Footnote 38: See *id.*; *Coal. for Responsible Regul., Inc. v. EPA*, 684 F.3d 102, 117 (D.C. Cir. 2012) (per curiam) (interpreting analogous provision under 42 U.S.C. (Section) 7521(a)(1)), *aff’d in part, rev’d in part sub nom. Util. Air Regul. Grp. v. EPA*, 573 U.S. 302 (2014).] These questions require a “scientific judgment”—not “policy discussions.” [Footnote 39: *Coal. for Responsible Regul.*, 684 F.3d at 117-18.] Any consequent regulatory considerations are “irrelevant.” [Footnote 40: *Id.* at 119.]

The first inquiry “requires a precautionary, forward-looking” judgment “about the risks of a particular air pollutant,” consistent with the Clean Air Act’s “precautionary and preventive orientation.” [Footnote 41: *Id.* at 122.] The existence of “some residual uncertainty” does not preclude EPA from making an endangerment finding. [Footnote 42: *Massachusetts v. EPA*, 549 U.S. 497, 534 (2007).]

That said, there is no such uncertainty here. “The body of scientific evidence marshaled by EPA” in support of its proposed endangerment finding for avgas “is substantial” and consistent with decades of agency findings regarding the public health and welfare harms associated with airborne lead pollution. [Footnote 43: See *Coal. for Responsible Regul.*, 684 F.3d at 120; *supra* section I.] This first prong is undoubtedly met.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Santa Clara County, supported by environmental organizations, petitioned the EPA to issue an endangerment finding. We appreciate that you acted on that request with your preliminary finding that lead emissions from aircraft cause or contribute to air pollution that might endanger public health. The endangerment finding is an important milestone but shouldn’t be the last.

Comment Number: EPA-HQ-OAR-2022-0389-0232-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Friends of the Earth. (web)

Excerpt Text:

It has been more than 25 years since the U.S. EPA required the phase-out of lead in automobile gasoline. Lead is a harmful and toxic chemical that causes a broad range of adverse health effects when absorbed by the body, with children being especially vulnerable. The EPA needs to move forward immediately to finalize the endangerment finding regarding leaded gas for piston-engine aircraft in the United States. As the largest source of airborne lead emissions, it is time you address the critical health issues that this fuel causes to people, communities, and the planet. The EPA must take timely action to protect the hundreds of thousands of children being exposed to airborne lead daily -- increasing the likelihood of detrimental health impacts, including nervous system disorders and learning disabilities. The impact of lead on public health, especially our children's health, has gone on way too long. The EPA must find that lead emissions from general aviation aircraft endangers public health and welfare and initiate a rulemaking to eliminate lead from general aviation as soon as possible. There is no safe level of lead exposure, and it is long past time to address the lead emitted from small aircraft. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

We urgently call for the Environmental Protection Agency (EPA) to finalize a finding that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act and that lead emissions from the engines of certain aircraft cause or contribute to this lead air pollution.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

When this rule is finalized, we ask that EPA acknowledge that the co-occurrence of these neurodevelopmental toxicants from this type of air emission source supports a finding of endangerment for lead emissions from piston-engine airplane emissions and further work may be required to address cumulative impacts in environmental justice communities.

Comment Number: EPA-HQ-OAR-2022-0389-0235-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Sierra Club

Excerpt Text:

Sierra Club fully supports EPA’s proposal to find that lead emissions from aircraft engines operating on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare, [*Italics: Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated to Endanger Public Health and Welfare*], 87 Fed. Reg. 62,753 (Oct. 17, 2022) (the “Proposal”). The Proposal responds to numerous public citizen proposals, dated as early as 2006 and as late as 2021; in light of the extreme public health dangers, and EPA’s delay in its response of a decade and a half, EPA must finalize the Proposal and issue standards that eliminate, or at a minimum, drastically reduce these poisonous emissions forthwith.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0001

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The undersigned local and regional government agencies hereby submit this public comment in support of the U.S. Environmental Protection Agency’s (“EPA”) proposed finding that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. As agencies charged with protecting the public health, safety, and welfare, we share a serious concern over the continuing and irreversible damage that lead air pollution from leaded aviation gasoline (“avgas”) inflicts on our constituents – particularly to the health and development of exposed children, the safety of airport workers, and the welfare of already overburdened airport-adjacent communities. Leaded avgas exposure also burdens public agencies responsible for administering public health, safety, and social safety net services that serve exposed populations, while compromising the safe operation of the many publicly owned airports. Eliminating lead air pollution from avgas nationwide lies within the purview of the EPA and should be treated as an urgent public health and environmental justice priority of this Administration. We commend the EPA on taking this necessary and long overdue step toward regulating lead emissions from piston-engine aircraft and urge it to finalize its proposed endangerment finding with haste.

Comment Number: EPA-HQ-OAR-2022-0389-0240-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

On behalf of Latinos United for a New America (LUNA), we write this letter in support of an endangerment finding of lead from aviation fuel as a health hazard, and we urge you to establish regulation for leaded fuel still used in small aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0001

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

Our analysis of existing research indicates that the presence of lead in aircraft engines has a significant, negative effect on public health, and we enthusiastically agree with the proposed EPA finding in support of these conclusions.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

The Law Foundation of Silicon Valley's Health Program is writing to strongly encourage the EPA to make a final finding that lead emissions from lead-fueled aircraft are an endangerment to public health and welfare. This finding would align with decades of research showing the detrimental effects of lead, as well as the lived experiences of our East San Jose neighbors who live near Reid-Hillview Airport (RHV).

Comment Number: EPA-HQ-OAR-2022-0389-0245-0001

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Our comments demonstrate that: (1) avgas poses serious public health and environmental justice concerns for states; (2) EPA should act swiftly to finalize the Proposed Endangerment Finding to protect communities in close proximity to general aviation airports from lead air pollution; and (3) EPA should initiate the emission standards rulemaking for lead in piston-engine planes as quickly as possible so that affected communities can benefit from the timely implementation of regulations addressing avgas. The Proposed Endangerment Finding is an overdue and crucial first step toward fulfilling the statutory goal set forth in 42 U.S.C. § 7571 (a)(1) of controlling the emission of harmful air pollutants from aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-0247-0004

Commenter Type: Local Government

Commenter:

Organization: Winthrop Board of Health

Excerpt Text:

The EPA has issued a proposed determination that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.

We support this proposed action that encompasses both proposed endangerment and proposed cause or contribute findings.

Comment Number: EPA-HQ-OAR-2022-0389-0257-0001

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

The City of Middleton, Wisconsin, joins other sponsors of general aviation airports to express our support for the proposed endangerment finding. We support the EPA's public health focus on the elimination of lead in aviation fuel and encourage the EPA to adopt the proposed endangerment finding and proceed to rulemaking.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

Lead in gasoline was recognized as a health hazard and an endangerment to the public health and actions were taken toward phasing out and ultimately banning lead in gasoline used in automobile engines. These same steps can and must be followed to remove lead from avgas in the US. Therefore, the EPA must rule that lead in avgas endangers the public health and welfare in the US. Only then can lead use in avgas be phased out and banned to protect the health and well-being of people in the US especially the most vulnerable, our children and future generations to come.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

In addition to exposures from piston-engine aircraft emissions, Alaska Natives and other Alaska residents may also be exposed to multiple sources of lead including large-scale metals mining, consumption of subsistence animals hunted with lead ammunition, fish contaminated with leaded fishing weights, lead from paint in older homes, and drinking water sources. These additional exposures to lead add to the cumulative adverse effects of lead exposure from avgas experienced by Alaska Natives and other Alaska residents.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Petitioners support EPA's Proposed Endangerment Finding and appreciate that EPA is finally moving forward to address this significant source of lead exposure. Lead emissions from the approximately 167,000 piston-engine aircraft that still use leaded avgas account for the most significant source of lead released in the United States' atmosphere. EPA has known about the dangers of leaded gasoline since at least the 1970s, when it first acted to get leaded gasoline out of the country's cars, and it has known for over a decade that any amount of lead in people's bodies is linked to serious health effects. Research demonstrates that lead emitted by piston-engine aircraft using leaded avgas is linked to higher blood lead

levels in children living near airports where these aircraft operate. The science is clear: Lead emissions from piston-engine aircraft endanger the public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0018

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

III. EPA Should Quickly Finalize the Proposed Endangerment Finding, and the Biden-Harris Administration Should Finalize a Ban on Leaded Avgas Before the End of President Biden’s First Term.

EPA must promptly finalize its endangerment finding and move on to regulating emissions from leaded avgas. The need for swift action flows directly from the overwhelming evidence that lead air pollution endangers the public health and welfare with widespread and serious consequences: Every day that planes continue to operate on leaded avgas is another day that individuals breathe in this polluted air and are put at risk of a wide array of adverse health effects, many of which are believed to be irreversible. These emissions have a disproportionate impact on people of color and individuals living in low-wealth communities, who already bear the brunt of disproportionate exposures to lead pollution. EPA must make good on its stated commitments to environmental justice and achieve the aims of its Lead Strategy by swiftly finalizing its Proposed Endangerment Finding and moving to the next stage of regulating leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0020

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

II. EPA’s Proposed Endangerment Finding Is Based on Years of Research, and There Is Ample Evidence Supporting Both Prongs of the Endangerment Finding.

There is ample evidence to support both prongs of the section 231(a)(2)(A) endangerment finding for lead emissions from aircraft operating on leaded avgas: first, that lead air pollution may reasonably be anticipated to endanger the public health and welfare, and second, that lead emissions from engines of certain aircraft cause or contribute to this lead air pollution. [Footnote 44: See 87 Fed. Reg. at 62,773 (explaining that EPA “is using the same approach of applying a two-part test under section 231(a)(2)(A) as described in the [final greenhouse gas findings in 2016] and is relying on the same interpretations supporting that approach”).] Indeed, EPA has long known that exposure to lead—including and especially airborne lead—is dangerous, and it has recognized for more than a decade that there is no safe level of lead and that any lead in the human body is dangerous. It is also clear that lead emissions from piston-engine aircraft contribute to lead air pollution; such lead emissions are responsible for approximately 70% of lead emitted domestically into the atmosphere each year. And recent research demonstrates that the lead emitted from piston-engine aircraft get into the blood of children living in proximity to airports where these aircraft operate, directly contributing to the harm faced by children with any level of lead in their blood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-012-0003

Commenter Type: Academia

Commenter: Bruce Lanphear

Organization: Simon Fraser University, on behalf of the County of Santa Clara

Excerpt Text:

What's more, if we improve the cognitive abilities of children today, it will have lifelong benefits for children and their entire communities. I urge you to declare leaded aviation fuel as an endangerment to human health.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0001

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

My name is Nathan Park and I am the legislative representative at Earthjustice, a public interest environmental law organization working to protect peoples' health and the environment through the strength of our partnerships and abroad. I and my colleagues at Earth Justice are glad to see EPA issue the proposed endangerment finding for leaded AVGAS gasoline and I am here to voice my support for the endangerment finding and urge EPA to act swiftly as it continues to work towards what would be a life-saving and overdue ban on leaded aviation fuels.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0008

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

NRDC stands with the community including the Cassell Neighborhood Association in seeking to eliminate lead exposure from the airport once and for all. EPA's lead strategy declared the Agency's commitment to protect all people from lead with an emphasis on high-risk communities. We urge EPA to adhere to that commitment and finalize the proposed endangerment finding as soon as possible

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0001

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

Green America supports the endangerment finding for leaded aviation fuel and the petitioners request for the EPA to hold to its timeline and ensure no delays in finalizing the endangerment finding on lead and aviation fuel. Green America is pleased that the EPA announced a proposed determination that emissions from aircraft operating on unleaded gasoline endanger public health and create air pollution. It is beyond time that we as a nation address the risk of leaded aviation fuel.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0001

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

Thank you, this is Dr. David Bryce. I am a medical doctor from the Town of Middleton, Wisconsin. I am one of the three people that have given testimony today. I applaud and support the EPA proposed endangerment finding for leaded aviation gas

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0004

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

In addition, as noted by the EPA in a 2013 LEAD ISA concluded that cardiovascular effects in adults were those of greatest concern for adults because the evidence indicated that these effects occurs at the lowest lead level. Public health and medical expert Dr. Lanphear acknowledged this in fact when he testified before the U.S. House Oversight Committee as well as today. He stated that the lead is a causal risk factor for adult coronary heart disease citing a 185,000 deaths caused by lead every year. In addition, lead exposure is an urgent public health problem, lead exposure is preventable, lead exposure from aircraft emissions from hobby airports is a major source of lead exposure. Lead is a cumulative poison and there is no safe level of lead exposure for humans.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0005

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

I urge you to make a final positive lead endangerment finding in 2023 and unleaded gas as soon as possible. This is an urgent public health matter and the FAA has already approved an unleaded aviation gas for use of all piston aircraft so there is no need for further delay.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-027-0002

Commenter Type: Academia

Commenter: Richard Reibstein

Organization: Boston University College of Arts and Sciences Department of Earth and Environment

Excerpt Text:

Thank you, EPA for starting this process now. We shouldn't be using lead much less in a way that disperses it. We have known about the dangers since ancient times. Leads harm cannot be invisible you must see them and you are helping make them more visible today, you are helping some of the people being harmed be seen by others and being heard so we know about their concerns for their children on whom the particles and the vapors are descending and about how -- how their situation where they cannot protect those children. We have heard about neighbors and workers and farmland being poisoned. It's one thing to ignore scientific data, it is another thing to turn away from actual people and refuse to see what they see and tell you about, so thank you today for these hearings, very important to have this public record. Now, some may look at this issue and say that EPA is in the middle now between an industry who has not moved and another by saying we will do it by 2030, but people are being harmed right now. But

how we regulate industry is a question for another day. This is an endangerment finding and you really have no choice but to find what we have known since the time of Hippocrates, 400 BC, he identified the dangers of lead, to fail to find lead as a dangerous air pollutant today would I believe be arbitrary and capricious so I encourage you to move ahead with all due speed, get this step over with so we can move on to constructive solutions that have to do with transitioning as quickly as we can to lead free skies.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0003

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

The EPA finally acknowledged what has been true for decades, there is no safe level of lead for the community burdened by general aviation pollution. The Maryland Fair Skies Coalition believes eliminating lead from aviation gas is taking too long. Environmentalists first petition the Agency to make an endangerment finding 16 years ago. Aircraft that use leaded fuel or other sources of lead emission to air in this country. EPA Administrator Michael Regan said in a statement exposure to lead can cause irreversible and lifelong health effects.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-027-0001

Commenter Type: Academia

Commenter: Richard Reibstein

Organization: Boston University College of Arts and Sciences Department of Earth and Environment

Excerpt Text:

I teach environmental law and policy at Boston University. When I talk about this issue, my students are rather surprised that it is something that happens. We are planning a conference with five communities later in December on this issue because the students found it important as many have said today. Quiet Communities Executive Director Jamie Banks couldn't be here today she apologizes. I spent 27 years in the Massachusetts Toxics Use Reduction Program working to reduce the use of many different chemicals, and I have always chosen to focus on lead when I can because to me it is in some ways the worst toxic problem. It is more than just the chemical toxicity, it represents our own ability to be blind, our own ability to act as we should or inability to act as we should. Evidence for its deep wide and severe harm is undeniable. We understand how lead takes the place of calcium, it isn't dislodged in the brain and how the brain stops growing at that location, we see monkeys exposed to lead grimacing and in the corner unable to play with others, we see images of brains where growth has stopped and they are smaller than they should be. We know that lead was not in ancient environments that it is now, that we have drawn it up from under the earth and spread it around, we know it doesn't breakdown but cycles through organisms causing damage again and again. We know it significantly harms all of us debilitating judgment, degrading ability to control our own behavior. There are not just specific victims from lead, we are all victims of lead and on top of that, most exposures are unnecessary and you are discussing a primary example today, the cost and the equities are out of balance, it's true that aircraft use has many benefits and that planes must be safe, but we should have transitioned to lead free skies long ago.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0003

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

As Dr. Lanphear mentioned, the Miranda and Zahran studies along with several others have consistently found that children who have regular contact with general aviation airports like the one in our community which is a hobby airport suffer some degree of lead poisoning from the use of leaded aviation gas at these airports. The Zahran study found elevated blood levels in some children whose only contact with the airport was driving past it twice a day going to and from school. There is no safe level of lead in a child and receiving a daily dusting of airborne lead from low flying airplanes most certainly endangers public health and welfare. The U.S. EPA Integrated Risk Information System has found it inappropriate to specify and accept a minimum safe level for airborne lead exposure because no threshold for lead toxicity has been established. The damage as Dr. Lanphear said and emphasized, especially in children, may occur at blood levels so low as to be essentially without a threshold. The CDC has noted that there is no safe level of lead exposure and the body absorbs higher levels of lead when it is inhaled. Once a small blood amount of lead is inhaled by a child with increased respiratory rate, it is too late to prevent potential health damage. There is no effective treatment to remove inhaled lead from a child's body and it will never go away. It will leave the blood stream and not be detected there for a few weeks but it will be stored in the body's organs and bones to accumulate over a lifetime. The only effective treatment for lead poisoning is not a treatment at all, it's the prevention of exposure in the first place.

Comment Number: EPA-HQ-OAR-2022_0389-0551-0001

Commenter Type: Private Citizen

Commenter: Elaine Swanson

Organization:

Excerpt Text:

I write from east central Wisconsin where our family lives on 50 acres of land where we have been working for over 30 years to create a wildlife sanctuary. Lead in fishing and hunting ammunition is responsible for untold amounts of suffering and death in wildlife. Likewise, leaded aviation gas is exceedingly toxic to our environment. [FL TEXT REMOVED] Sincerely, Elaine Swanson Pickett, WI 54964

Comment Number: EPA-HQ-OAR-2022-0389-0189-0001

Commenter Type: Private Citizen

Commenter: Val Lea

Organization:

Excerpt Text:

I live on the north side next to the Oakland County International Airport in Waterford Michigan. When I moved here almost 10 years ago the air traffic was not bad but in the last years it has increased substantially, as much as 20 fold.

I am very concerned about the noise and the effects of lead in the air and lead contaminating the soil and lakes nearby. I'm concerned for myself, the residents, and there are 3 schools nearby plus childcare centers.

The pilots of these planes and helicopters will fly around my neighborhood frequently multiple numbers planes at a time for hours almost every day starting as early as 8am to as late as 11pm.

I've contacted the airport, the airport manager, the county executive, and the FAA but have not had consistent, if any, help. It seems that the attitude is if you choose to live near an airport that you should expect to have issues. I believe the only real solution is for the EPA to establish regulations that will help protect citizens from the potential dangers.

The airport participates in the Fly Quiet program which can help to cut down on both the lead exposure and the noise. Unfortunately it is not consistently enforced. Lately there is one air traffic controller who does seem to try and get the pilots to cooperate but in general the task is difficult because one person with limited authority cannot solve the problem.

It's easy to minimize or ignore hidden dangers. Only the EPA can solve this problem.

Comment Number: EPA-HQ-OAR-2022-0389-0196-0005

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

If the FAA refuses to enforce their vague and often contradictory rules and regulations, they could at least try to practice Environmental Justice by equally distributing the air traffic and resulting pollution.

Currently air traffic and pollution is higher in disadvantaged areas. (see attachment 3) If you guessed that Brentwood, Franklin and Spring Hill are where the wealthy people live, good guess. I would like to know who designated the area east of Interstate 24 as the flight training practice area of Middle Tennessee. This past year, this disadvantaged rural area has been inundated with leaded fuel exhaust pollution and noise pollution continually on a daily basis. What are the cumulative effects of the settled particulate on the tree leaves, the blades of grass, the water in the creeks and ponds, all of which the wildlife and livestock consume on a daily basis? Do the calves and fawns in this area have abnormal levels of lead in their blood similar to children exposed to high levels of lead? Most people I talk to are surprised that leaded fuel is still being used by small aircraft. The EPA could do a better job of communicating. Reading the comments of others living halfway across the country, has made me realize that "We are all riding on the same bus". Or as my mother used to say when I was dragging my feet. "GET THE LEAD OUT"

Comment Number: EPA-HQ-OAR-2022-0389-0238-0009

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

Public Welfare

Though the EPA presents leaded avgas primarily as a danger to public health, the societal costs of this lead exposure also do profound harm to the public welfare. Clean Air Act section 302(h) defines "welfare" to include "effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants." [Footnote 37: 42 U.S.C. § 7602(h).] The economic costs of lead exposure are immense. Researchers have conservatively estimated that exposure to lead from all sources among children aged six and younger results in total nationwide costs of \$192-270 billion for each cohort of lead poisoned children, divided between lost lifetime earnings (\$165-233 billion) and related lost tax revenue (\$25-35 billion), direct medical treatment costs for lead poisoning (\$11-53 billion), special education costs (\$30-146 million), costs of lead-linked ADHD cases (\$267 million annually), and direct costs of lead-linked criminal activity (\$1.7 billion). [Footnote 38: Gould, Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead

Hazard Control, 117 Env't Health Perspectives 1162, 1162 (July 2009).] In 2012, Oakland's Office of Planning, Building & Neighborhood Preservation estimated that medical services, special education, disabilities, and lost wages due to lead poisoning cost city residents upwards of \$150 million each year.[Footnote 39: Tobias, Racial Equity Impact Analysis: Eliminating Lead Paint Hazards in Oakland & Alameda County 11 (2021), available at https://cao-94612.s3.amazonaws.com/documents/Lead-Paint-REIA_9-23-21_FINAL.pdf.]

The actual economic and non-economic damage to public welfare far exceeds these costs. These conservative estimates exclude the costs of treatment of secondary health harms caused by lead, neonatal mortality, loss in property value, and other indirect costs.[Footnote 40: Gould, *supra* note 38, at 1166.] They also underestimate total societal costs by excluding impacts of lead exposure on older children and adults and by omitting consideration of indirect impacts of exposure on those who care for, are cared for by, or live or work alongside lead-exposed individuals or are otherwise indirectly affected through the diversion of resources.[Footnote 41: See, e.g., Gazze et al., The Long-Run Spillover Effects of Pollution: How Exposure to Lead Affects Everyone in the Classroom, Nat'l. Bureau of Econ. Rsch. Working Paper No. 28782 (May 2021) (finding that having more lead-exposed peers is associated with reduced academic outcomes).] Other significant sources of non-economic harms – including the emotional and psychological harms of lead exposure – need to be accounted for as well.

Lead exposure from piston-engine aircraft contributes to these immense societal costs. Studies have conservatively estimated costs of \$1 billion nationwide each year, accounting only for lost lifetime earnings due to IQ decreases resulting from leaded avgas exposures to young children.[Footnote 42: Zahran et. al., The Effect of Leaded Aviation Gasoline on Blood Lead in Children, 4(2) J. of the Ass'n of Env't & Res. Economists 575, 605 n.17 (2017); Wolfe et. al., Costs of IQ Loss from Leaded Aviation Gasoline Emissions, 50(17) Env't Sci. & Tech. 9026 (2016).] Adding in healthcare costs, special education costs, behavior and crime control costs, costs associated with adult and worker exposures, and other direct and indirect costs would significantly increase this estimate.[Footnote 43: Zahran et al., *supra* note 42, at 604; Wolfe et al., *supra* note 42, at 9031; RHV Lead Exposure Report, *supra* note 21, at 7.]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0011

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

While these societal costs are borne most heavily by affected communities, they also impair the ability of public agencies to fulfill our core duties of protecting the health, welfare, and safety of our constituents. The societal costs of lead air pollution ripple through social safety net systems administered by public agencies, burdening our services and forcing us to divert resources from other efforts. The most directly impacted public systems include public health systems and government-run hospitals. State and local governments are at the frontline of public health protection, operating 19% of the nation's community hospitals[Footnote 44: Am. Hosp. Ass'n, Fast Facts on U.S. Hospitals (2022), <https://www.aha.org/statistics/fast-facts-us-hospitals>.] and performing the bulk of public health activities nationwide. These public health and hospital systems expend resources to screen children for elevated blood lead levels, identify and prevent sources of exposure, and manage cases when children are identified as having elevated blood lead levels. In addition to direct treatment of lead-poisoned individuals, screening and treatment for the many secondary harms that lead poses – including harms to cardiovascular health, immune system and kidney function, reproductive system function, and cognition – consume staffing attention and resources.

Lead exposure also imposes costs on school systems, special education services, policing, and crime control infrastructure while reducing the tax revenue available to support these systems. In particular, public agencies operate childcare and public school systems, where behavioral and learning challenges resulting from lead exposures necessitate increased investment in special education services and divert resources from other needs.[Footnote 45: See Gould, *supra* note 38, at 1164-65.] Behavioral effects of lead exposure also have consequences for crime levels, which in turn tax public safety systems. [Footnote 46: *Id.* at 1165.] For instance, empirical analysis suggests that the reduction in childhood lead exposure caused by the removal of lead from gasoline in the 1970s was the most significant driver of the drop in violent crime during the 1990s.[Footnote 47: See Wolpaw Reyes, *Environmental Policy as Social Policy? The Impact of Childhood Lead Exposure on Crime*, Nat'l. Bureau of Econ. Rsch. Working Paper No. 13097 (May 2007).] Meanwhile, reduction in lifetime earnings attributable to lead exposures results in lost tax revenues for state and local governments [Footnote 48: Gould, *supra* note 38, at 1164.] While the specific contribution of avgas to these socialized costs may be incremental, it stands out as particularly egregious given the complete absence of federal regulation of this major ongoing source of lead pollution.

Lead air pollution from avgas even compromises the ability of public agencies to operate their general aviation airports and the services those airports provide. In addition to hosting commercial and private flights and pilot trainings, many general aviation airports provide critical functions such as emergency medical transport and wildfire response. These services cannot be provided without putting airport workers, their families, and airport adjacent communities at undue risk while leaded fuel continues to be used.[Footnote 49: See NAS Report, *supra* note 11, at 60, 63-67 (explaining that airport workers may be directly exposed to dispensed or spilled fuels and may take it home to their households on their clothes).] In addition to compromising the ability of airports to safely provide these services, exposures to airport workers may result in healthcare costs, workers' compensation costs, and other benefits payouts.[Footnote 50: See Levin, *The Attributable Annual Health Costs of U.S. Occupational Lead Poisoning*, 22 *Int'l J. of Occupational & Env't Health* 107 (2016).] Leaded avgas more than contributes to harmful lead air pollution.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0012

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

2. Welfare Effects

These health effects alone would be sufficient to support an endangerment finding for lead air pollution, but as EPA correctly points out, lead air pollution is associated with a wide array of adverse welfare effects. In addition to the effects of lead on the terrestrial, freshwater, and saltwater environments that EPA reviews in its Proposed Endangerment Finding, lead also has a detrimental impact on welfare through the downstream consequences—including economic consequences—of its health effects. [Footnote 76: See 42 U.S.C. (Section) 7602(h) (stating that “language referring to effects on welfare includes” both effects on various parts of the environment as well as “effects on economic values and on personal comfort and well-being”).] One study conservatively estimated that reducing the blood lead levels of all children in a single cohort of 24 million children aged six years or under to 1 (micrograms)g/dL or lower would result in a savings to society of \$1.2 trillion through increased earnings, lower administrative costs for social safety-net programs, and lower social costs of crime. [Footnote 77: See Peter Muennig, *The Social Costs of Childhood Lead Exposure in the Post-Lead Regulation Era*, 163 *Archives Pediatrics & Adolescent Med.* 844 (2009), <https://jamanetwork.com/journals/jamapediatrics/fullarticle/382153>.] The same study estimated that a reduction in blood lead levels of this magnitude would produce an additional 4.8 million quality-adjusted

life years. [Footnote 78: Id.] Another study calculated the nationwide annual costs of IQ losses from aircraft lead emissions and found that such emissions contributed an estimated \$1.06 billion in 2006 USD from lifetime earnings reductions alone. [Footnote 79: See Philip J. Wolfe et al., Costs of IQ Loss from Leaded Aviation Gasoline Emissions, 50 Env't Sci. Tech. 9026 (2016), <https://doi.org/10.1021/acs.est.6b02910>.] Similar research evaluating the effects of piston-engine aircraft traffic in Michigan conservatively estimated that reducing such traffic from the 50th percentile to the 10th percentile of operations would generate a benefit of about \$120 million (measured as the net present value of future earnings). [Footnote 80: See Sammy Zahran et al., The Effect of Leaded Aviation Gasoline on Blood Lead in Children, 4 J. Ass'n Env't & Res. Economists 575 (2017), <https://doi.org/10.1086/691686>.] These economic effects only reinforce EPA's determination that lead air pollution may be reasonably anticipated to endanger public welfare, and EPA should consider these welfare effects in finalizing its finding.

Comment Number: EPA-HQ-OAR-2022-0389-0166-0001

Commenter Type: Private Citizen

Commenter: Marilu Zepeda

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I am Marilu, I have been living to the east of San Jose for many years and I live near an airport that still has piston-powered aircraft service and according to the lead study carried out in this sector this Reid-Hillview is associated with air pollution and is a danger to my family's health and that of the entire population that lives near this airport. They also pollute the trees and food, and breathing this pollution is a hazard to everyone's health. I ask the government not to let these planes use leaded gasoline any longer.

Comment Number: EPA-HQ-OAR-2022_0389-0532-0001

Commenter Type: Private Citizen

Commenter: Pamela Osgood

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. Quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Everyone knows that lead is bad for humans and animals and water and air.....bad for life. [FL TEXT REMOVED] Sincerely, Pamela Osgood San Francisco, CA 94110

Comment Number: EPA-HQ-OAR-2022-0389-0165-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: STOP Jet Noise NOW! SFOAK North S.F. Bay Area

Excerpt Text:

Unfortunately, science has not yet found any safe means to detoxify the human body from lead exposure, and lead exposure is proven to contribute to lower cognitive function is all ages. Who would dismiss such knowledge, and willingly expose innocent people and children to such a risk?

The time to act is now. The EPA has an opportunity to correct a very serious error from the past. Please do what your scientist all know is the right thing to do.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0003

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-[**Bold:** EPA Question]: Is it likely that lead air pollution (including from aircraft emissions) may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act?

-[**Bold:** Swift Fuels Answer]: Yes, lead is a neurotoxin that can accumulate in soft tissues and bones from being ingested or inhaled, and thus it can create health-related problems. Tetraethyllead used in 100LL avgas does produce toxic microfine airborne particulates which our R&D team has measured from piston aircraft tailpipe emissions, and according to medical studies the lead exhaust does pose some increased risk to human health particularly for infants and young children who come in close proximity to those lead emissions.

Comment Number: EPA-HQ-OAR-2022_0389-0324-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

For children/ pregnant women exposed to high levels of lead, it can cause developmental delays in babies and children as well as neurological changes due to lead being able to cross the placental barrier. Exposure to lead can also lead to anemia, weakness, and can even cause kidney and brain damage. According to the World Health Organization, there is no safe level of exposure to lead, demonstrating how important it is for the EPA to restrict and monitor the amount of lead emissions being released in the air.

Response to Comments Supporting the EPA's Finding that Lead Air Pollution May Reasonably Be Anticipated to Endanger Public Health and Welfare

Many commenters support or strongly support the proposed endangerment finding. Some commenters agree with or reiterate scientific information that the EPA had included in the proposed endangerment finding, and some commenters provide additional scientific or technical information regarding lead or offer their views or opinions regarding such information. Some commenters generally highlight the strength of the scientific information supporting the finding, stating, for example, that it is well documented that lead pollution damages human health and the environment. Some commenters focus on information related to health effects and support a conclusion that lead air pollution endangers public health. For example, citing published information from the U.S. Department of Health and Human Services National Institutes of Health, one commenter states that humans can be exposed to lead through inhalation of lead-containing particles, among additional sources and routes of exposure; other commenters make similar statements. Many commenters state that lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior

problems, and speech and hearing problems, with many of these commenters arguing that some neurocognitive effects of lead on concentration, intellect, and academic achievement may be transient, while other effects may persist into adulthood. Many commenters stated that lead harms adult cardiovascular health, and several commenters reference a 2018 Lancet Public Health study stating that the study found that nearly 412,000 cardiovascular disease deaths in the U.S. each year are due to lead contamination.¹ Some commenters additionally state that lead exposure is associated with issues regarding pregnancy, including miscarriage, stillbirth, premature birth, and low birthweight. Other comments raise concerns about health effects that individuals report experiencing, which they attribute to exposure to lead or proximity to airports.

Many commenters assert there has been no safe level of lead exposure found, and some cite authorities for this concept, including the U.S. Centers for Disease Control's statement that "No safe blood lead level in children has been identified"² or the statement in the 2013 Lead ISA that "there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure."³ One commenter asserts that research conducted since the ban on leaded motor vehicle gasoline, some of which was carried out at the University of Rochester, NY, has revealed that safe levels of lead, especially for children, are much lower than once thought. Some commenters state that lead is a persistent, cumulative toxin that stays in the environment and is difficult or impossible to mitigate. Additionally, some commenters express concern regarding potential welfare effects of lead air pollution, stating, for example, that lead can negatively impact the environment, including water sources, soil, and plants. Some commenters expressly support a conclusion that lead air pollution endangers public welfare.

Some comments raise concerns about lead-related health effects that were not mentioned in the proposal, such as autism. Additional commenters note that the small size of particulate lead in aircraft exhaust tends to be significantly smaller than particulate lead from other sources, and they assert that these small lead particles may have the "potential of rapidly penetrating the lung defenses" and "gain[ing] direct access to the brain," increasing the potential for neurological and cognitive damage.⁴ One commenter indicates their R&D team has measured microfine airborne particles in the exhaust from aircraft operating on leaded avgas and they note that according to medical studies, the lead exhaust does pose some increased risk to human health, particularly for infants and young children who come in close proximity to those lead emissions.

Commenters additionally state that the societal costs of this lead exposure also do profound harm to the public welfare. The commenters provide references to studies that they state report, among other things, lead damage the US economy in terms of: 1) diminished IQ resulting in lost wages of \$165 billion to \$319 billion; 2) cardiovascular, neurological, kidney disorders, and mortality; and 3) a variety of societal problems linked to lead exposure, such as criminal behavior, personality, psychopathology, and diminished social mobility. The commenters assert that the actual economic and non-economic damage to public welfare far exceeds these costs in loss in property value, and other indirect effects. The commenters additionally assert that lead exposure from piston-engine aircraft contributes to these immense societal costs, and they cite studies estimating costs of \$1 billion nationwide each year, accounting only for lost lifetime earnings due to IQ decreases resulting from leaded avgas exposures to young children. Commenters further detail the societal costs borne by public agencies whose core duties

¹ Lanphear, B., Rauch, S., Auinger, P., Allen, R., Hornung, R. (2018). Low-level lead exposure and mortality in US adults: a population-based cohort study. *Lancet Glob Health*. 3:e177–e184.

² <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>.

³ EPA (2013) Integrated Science Assessment for Lead at pp. lxxxvii-lxxxviii.

⁴ These comments cite the following documents for statements: National Academies of Sciences, Engineering, and Medicine 2021. *Options for Reducing Lead Emissions from Piston-Engine Aircraft*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26050>; Declaration of Bruce Lanphear 14, attesting that "small particles of lead" from aircraft emissions "are readily absorbed and may be transported directly to the brain via the olfactory nerve." (see Comment EPA-HQ-OAR-2022-0289-0238_attachment_2 Exhibit A).

include protecting the health, welfare, and safety of constituents. Among these impacts, the commenters state that lead exposure also imposes costs on school systems, special education services, policing, and crime control infrastructure while reducing the tax revenue available to support these systems. At least one commenter argues that these economic effects only reinforce the EPA's determination that lead air pollution may be reasonably anticipated to endanger public welfare, and they assert that the EPA should consider these welfare effects in finalizing its finding.

Some commenters indicate that the legal requirements for an endangerment finding for lead are satisfied. One commenter agreed that there is ample evidence to support the Administrator's conclusion that lead air pollution may be reasonably anticipated to endanger both the public health and welfare, but additionally notes that the Administrator need only find that such air pollution may reasonably be anticipated to endanger public health or welfare. Another commenter states that the EPA provides more than enough evidentiary support for both prongs, and that even this understates the evidence for a positive endangerment finding. Some commenters express agreement with the proposed findings, stating that they properly reflect the scientific evidence that young children are vulnerable to a range of neurological effects resulting from exposure to lead, noting that the basis of the endangerment finding is the comprehensive review and consideration by agency experts of extensive scientific evidence that has been accrued over decades and peer-reviewed by EPA's Clean Air Scientific Advisory Committee.

The EPA acknowledges these comments in support of the endangerment finding, and notes that as described in Section IV of the final notice, the Administrator is finalizing the finding that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act (CAA), as proposed. While the EPA agrees that either a finding that lead air pollution may reasonably be anticipated to endanger public health or a finding that lead air pollution may reasonably be anticipated to endanger public welfare could satisfy the first part of the two-part text under CAA section 231(a)(2)(A) that the Administrator is applying to this action, it also agrees that both findings are independently supported in this action, and is therefore finalizing the finding with respect to both public health and public welfare. Further, the EPA agrees with the commenters noting that this endangerment finding is well supported by the extensive scientific evidence that has been amassed over decades and rigorously peer reviewed by the EPA Science Advisory Board's Clean Air Science Advisory Committee.

In response to commenters who identify potential health or welfare effects of lead, or other scientific information, views, or analyses, that were not addressed in the proposed or final action, the EPA notes that the health and welfare evidence regarding the effects of lead air pollution which is the basis of the final endangerment finding is described in Section IV of the final notice. The EPA does not interpret these supportive comments as indicating disagreement with the evidence on health or welfare effects information that was presented in the proposed endangerment finding, but rather understands these comments to suggest that the additional information they provide should also be considered as support for finalizing the findings. However, under the approach discussed in Sections III and IV of the final notice, the intention behind this endangerment finding is not to provide a new, exhaustive catalogue of all of the health or welfare effects that could potentially be associated with lead air pollution. Rather the approach here is to rely on information presented in the AQCDs for Lead⁵ and the 2013 Lead ISA⁶ to provide the primary scientific and technical basis to inform the Administrator's decision under section 231(a)(2)(A) of the CAA as to whether, in his judgment, the air pollution under consideration may reasonably be anticipated to endanger public health or welfare. This approach is reasonable, as these documents critically assess and integrate relevant scientific information regarding the health and welfare effects of lead and have undergone extensive critical review by the EPA, the Clean Air Scientific Advisory Committee (CASAC), and the public, as described in Section IV.A of the final notice. As the scientific

⁵ See, e.g., EPA (2006) Air Quality Criteria for Lead. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

⁶ EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

evidence and information included in Section IV provides ample support to finalize the endangerment finding as proposed, the EPA need not evaluate whether other information could provide additional support for finalizing the endangerment finding. Further, even if the EPA were to agree with these commenters that this information could offer additional support for the endangerment finding, considering the information would not change the Administrator's final decision on the endangerment inquiry, as there is sufficient information to support an affirmative endangerment finding based on the information described in Section IV of the final notice.

One commenter asserts that the U.S. EPA Integrated Risk Information System has found it inappropriate to specify and accept a minimum safe level for airborne lead exposure because no threshold for lead toxicity has been established. While decisions under the Integrated Risk Information System are outside the scope of this action, the EPA notes that interested readers can find the EPA explanation for why the Agency has not developed ingestion and inhalation reference values for exposure to lead at this site: https://iris.epa.gov/static/pdfs/0277_summary.pdf.

Some commenters describe concerns regarding the health effects of tetraethyl lead, the additive to leaded avgas. The endangerment finding is not focused on any particular form of lead; rather, as described in Section IV.A.1 of the final notice, the lead air pollution can occur as elemental lead or in lead-containing compounds, including tetraethyl lead, and this definition of the air pollution recognizes that lead in air (whatever form it is found in, including in inorganic and organic compounds containing lead) has the potential to elicit public health and welfare effects

One commenter asserts that while the Proposed Endangerment Finding recognizes the unique harms lead has on children's health, EPA should expressly consider children as well as pregnant and breastfeeding people as "vulnerable subpopulations" especially at risk of harm from lead exposure under the endangerment-finding framework. Other commenters express concerns about other groups or communities that may be particularly affected by lead air pollution, including, for example, older individuals, people who live near or attend school near airports, or airport workers. In response to these comments, the EPA notes that, as described in Section IV.A of the final notice and mentioned earlier in this section of the RTC document, in making the determination that lead air pollution is reasonably anticipated to endanger public health and welfare, the EPA is relying on the AQCDs for Lead and the 2013 Lead ISA. As described further in Section IV.A.2 of the final notice, the 2013 Lead ISA identified factors that may increase the risk of health effects of lead exposure due to susceptibility and/or vulnerability; these are termed "at-risk" factors.⁷ The 2013 Lead ISA concludes that "there is adequate evidence that several factors – childhood, race/ethnicity, nutrition, residential factors, and proximity to lead sources – confer increased risk of lead-related health effects."⁸ The EPA does not interpret these comments as indicating disagreement with consideration of these at-risk factors in the context of this endangerment finding, but rather understands these comments to suggest consideration of additional groups as vulnerable subpopulations. Consistent with the approach described in Section IV.A of the final notice, EPA is not evaluating in this action whether additional groups should be considered as vulnerable subpopulations under the endangerment-finding framework. Even if the EPA were to agree with these commenters that additional groups should be considered as vulnerable subpopulations, it would not change the Administrator's final decision on the endangerment inquiry, as there is sufficient information to support an affirmative endangerment finding based on the information described in Section IV of the final notice.

Some commenters raise concerns about cumulative effects from exposures to lead from various sources. One commenter asserts that Alaska Natives and other Alaska residents may be exposed to multiple sources of lead and expresses concern that these exposures add to the cumulative adverse effects of lead

⁷ EPA (2013) ISA for Lead. Chapter 5. "Approach to Classifying Potential At-Risk Factors." p. 5-2. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

⁸ EPA (2013) ISA for Lead. Section 5.4. "Summary." p. 5-44. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

exposure from avgas experienced by Alaska Natives and other Alaska residents. Another commenter states that the EPA should expressly “consider the cumulative impact of lead from numerous sources, not just the fuels”⁹ at issue here, as well as the multiple exposures to lead that individuals face; this commenter cites the description of five principles that guide the Administrator’s scientific judgment about the potential risks posed by lead emissions to public health and welfare from the 2016 Findings for greenhouse gases under CAA section 231 (81 Fed. Reg. at 54,436) and *Ethyl Corp. v. EPA*, 541 F.2d 1, 29–31 (D.C. Cir. 1976). This commenter further states that while the EPA is correct in concluding that lead air pollution endangers public health and welfare, in its final endangerment finding, it should explain how the cumulative impact of lead from multiple sources informs this conclusion (and thus clarify how it considered the fourth principle guiding its analysis). This comment further states that “considering cumulative sources of lead exposure supports EPA’s proposed conclusion that lead pollution may reasonably be anticipated to endanger public health and welfare.”¹⁰ In response, the EPA notes that while its analysis for this endangerment finding for lead air pollution was guided by the same five principles that guided the Administrator’s analysis in the 2016 Findings, as described in Section III.B of the final notice, the EPA has discretion in how it applies those principles in explaining the grounds supporting a particular endangerment finding. As described in the 2016 Findings, the fourth principle cited by the commenters is that “the Administrator is to consider the cumulative impact of sources of a pollutant in assessing the risks from air pollution, and is not to look only at the risks attributable to a single source or class of sources.” (81 FR at 54435). Further, the EPA explained that “in making an endangerment finding, the Administrator is not limited to considering only those impacts that can be traced to the amount of air pollution directly attributable to the subject source classes.” *Id.* Consistent with this description, the lead air pollution considered in the endangerment finding finalized in this action is not limited to only lead air pollution that can be traced to the covered aircraft, but rather also includes other sources of air-related lead. Section IV.A.1 of the final notice includes a definition of the air pollution for this finding as lead, further noting that lead in the air is emitted by a wide range of sources. Section IV.A.2 of the final notice also recognizes that human exposure to lead that is emitted into the air can occur by multiple pathways and can involve media other than air. To the extent that the comment seeks a more detailed description of how the cumulative impact of lead from multiple sources informs the endangerment finding, the EPA does not think that such a description is necessary to support the endangerment finding in this case. The extensive and well-documented information about the public health and welfare impacts related to lead air pollution, as summarized in Section IV of the final notice, provides sufficient grounds to support the Administrator’s judgment that, for purposes of CAA section 231(a)(2)(A), the lead air pollution may reasonably be anticipated to endanger the public health and welfare.

Some commenters state that the evidence overwhelmingly demonstrates that leaded avgas meets the legal requirements for an endangerment finding, and other commenters assert that it would be arbitrary and capricious of the EPA not to find that lead is a dangerous air pollutant. Some commenters request, or state that the EPA must find that lead emissions from lead-fueled aircraft or general aviation aircraft endanger public health and welfare. The EPA notes that while it understands the intent of these comments to be generally supportive of finalizing the proposed findings, they conflate the endangerment and cause or contribute steps of the analysis. As described in Section III.A and Section III.B of the final notice, EPA understands section 231(a)(2)(A) of the CAA to call for the Administrator to exercise his judgment and make two separate determinations: first, whether the relevant kind of air pollution (here, lead air pollution) may reasonably be anticipated to endanger public health or welfare, and second, whether emissions of any air pollutant from classes of the sources in question (here, any aircraft engine that is capable of using leaded aviation gasoline) cause or contribute to this air pollution. As described in the final notice for this action, the Administrator is making affirmative findings for both determinations. As explained in those sections of the final notice, the analysis for the first determination looks at the air

⁹ Comment EPA-HQ-OAR-2022-0389-0268-0011.

¹⁰ Comment EPA-HQ-OAR-2022-0389-0268-0011.

pollution being considered as a whole; it is not limited to considering risks from a particular source (such as leaded avgas or emissions of the lead air pollutant from lead-fueled aircraft). Accordingly, as described in Section IV of the final notice, the finding on the first prong (endangerment) is focused on the lead air pollution.

Similarly, some commenters state that the EPA finally acknowledged what the commenters say has been true for decades, there is no safe level of lead for the community burdened by general aviation pollution, and one commenter states that their analysis of existing research indicates that the presence of lead in aircraft engines has a significant, negative effect on public health, and they enthusiastically agree with the proposed EPA finding in support of these conclusions. In response to these comments, the EPA acknowledges these supporting comments but further notes that these statements also seem to conflate the endangerment determination and the cause or contribute determination. As referenced in the prior paragraph and described more fully in Section III.A and III.B of the final notice, the Administrator is making two separate affirmative findings in this action, one for the endangerment prong and one for the cause or contribute prong. These findings are not a risk assessment regarding the potential human health or welfare harms for those living in close proximity to airports where lead emissions occur.

Some commenters request that the EPA acknowledge that the co-occurrence of neurodevelopmental toxicants from this type of air emission source supports a finding of endangerment for lead emissions from piston-engine airplane emissions. In response, the EPA notes that like the comments addressed in the prior paragraph, these comments also conflate the endangerment and cause or contribute steps of the analysis. Furthermore, as described in Section IV of the final notice, this endangerment finding is focused on the health and welfare effects of lead air pollution. As such, we are not assessing the co-occurrence of neurodevelopmental toxicants other than lead for the purposes of this action, nor are we relying on such a co-occurrence as part of the support for this action.

In response to commenters who ask that the EPA do everything in our power to decrease the exposure to lead emissions from aviation, as well as those who ask that we ban lead or assert that we have better options than leaded fuel, and more companies will invest in those options if leaded fuel is banned, we note that while these considerations are not relevant to the endangerment finding, the EPA's authority and duties following these proposed standards are addressed in Section 7 of this Response to Comments Document.

The EPA notes that the responses in this section are focused on the aspects of the comments that relate to the endangerment finding. Responses to other aspects of these comments can be found in other sections of this document. For example responses to: comments regarding environmental justice and equity are in Section 3; children's health and their potential exposures near airports where covered aircraft operate, are in Section 4; comments regarding emissions of lead at airports in specific communities are addressed in Section 6.1; comments requesting that the EPA ban leaded avgas and work with the FAA to regulate lead from aircraft are addressed in Section 7; comments requesting monitoring in communities near airports are addressed in Section 8.2.1; comments requesting education and outreach are addressed in Section 8.2.2; the response to comments regarding the FAA's duties are addressed in Section 8.3; the response to comments regarding the cost of creating new aircraft fuels and reengineering aircraft engines to accommodate new fuels are addressed in Section 8.4; and comments regarding unleaded fuel alternatives and engines that can operate on unleaded avgas are addressed in Section 8.5.

5.2. Comments Expressing Opposition or Other Perspectives Regarding the Endangerment Finding

Comment Number: EPA-HQ-OAR-2022-0389-0244-0004

Commenter Type: State Government

Commenter:**Organization:** Alaska Department of Environmental Conservation**Excerpt Text:**

There appear to be no epidemiological studies regarding exposure to 100LL avgas, at least in Alaska, and perhaps there are none for the United States. Further, there is no proof that 100LL avgas has any detrimental effect on people living near Alaska's airports. This is especially important when we consider that aviation and the related 100LL avgas provide basic access to remote communities that are not connected to the road system. Since Alaska will be disproportionately impacted by any ruling on 100LL avgas, any population or epidemiological studies being used to support rulings should contain Alaska specific data. Many of the studies being used to support this decision did not contain data from Alaska.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0009**Commenter Type:** State Government**Commenter:****Organization:** Alaska Department of Environmental Conservation**Excerpt Text:**

Additionally, epidemiological studies need to be done that include Alaska's rural residents who live near our airports.

Comment Number: EPA-HQ-OAR-2022-0389-0226-0003**Commenter Type:** Fuel Manufacturer/Importer**Commenter:****Organization:** General Aviation Modifications, Inc.**Excerpt Text:**

Rational people do not deny that consumption or ingestion of lead is a hazard to humans. But, as in all of the science related to pollution and the environment, the "dose" is also of critical importance.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0011**Commenter Type:** Advocacy Organization**Commenter:****Organization:** Coalition for Sustainable Aviation (CSA)**Excerpt Text:**

Lead emissions are 425 times less today than when the Clean Air Act came into being. Since the passage of the Clean Air Act (CAA) by Congress in 1970, lead emissions in the United States have been reduced by a remarkable 99+%, or over 200,000 tons/year. The efforts of EPA, along with those of refiners and automobile engine manufactures are to be commended. In roughly 2 generations, all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than 1/4 of 1% of the lead emissions of the 70's. It should be recognized that the biggest endangerment that the public has ever faced from lead emissions has already been eliminated, through the regulation of transportation fuel and the phase out of lead from automobile gasoline. For our current EPA administrator to "find that lead air pollution may reasonably be anticipated to endanger the public health and welfare" is a high bar to clear when viewed in context of past achievements.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0705-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Rob Reece

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0011

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

Appendix A

Critiques of Previous Studies and Putting Scale of Findings Into Context

The purpose of “A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels” was to find any correlation between geographical proximity to airports and an increase in Blood Lead Levels (BLLs). The conclusion of the survey was: “We estimated a significant association between potential exposure to lead emissions from avgas and blood lead levels in children. Although the estimated increase was not especially large, the results of this study are nonetheless directly relevant to the policy debate surrounding the regulation of leaded avgas.” Put into other terms, the increase of BLL was “statistically significant” using the assumptions put forward, however the study mentioned that the likely practical significance was low.

The average lead levels for the sampled children from 9 months to 7 years was 3.88 µg/dL +/- 2.94 Stdev. Using correctly adjusted data and using the middle of the calculated distribution, the study found that there was only a 0.034 µg/dL increase when the subjects lived within 500 meters of the airport. As mentioned in the study, although there was a statistically significant positive correlation between subjects living within 500m of the airports selected in the study, the increase was 86 times smaller than the StdDev that is already present in the general population in the counties studied. This should not be considered a reasonable factor in endangering the health of the public.

It is important to note that, even after using a lower level of scrutiny (p=0.10), the study was unable to statistically prove, after adjustment, that there was any increase of lead levels in blood samples for

individuals living 501-1,000 m of the airport. This furthers the potential efficacy of the solution put forth by the comment put forth by CSA, which involves the relocation of the CODALE.

Using data gathered from the EPA, we can see that the national median BLL is less than a third since the start date of this study in 1976, from 2.2 µg/dL -> 0.6 µg/dL. See chart below provided by the EPA. With this lower level of lead in the general population, and the practically insignificant increase in lead levels due to geospatial relation to airports, the likelihood that lead introduced by AvGas would be a significant source that would push any individual above the actionable threshold of 10 µg/dL is beyond improbable. It would similarly be improbable using the CDC recommendation of 5 µg/dL. This needs to be taken into account when balancing the potential risk of aircraft operation and economic impact that regulating the lead content in AvGas might cause.

[See original document for graph]

Due to the fact that the surrounding properties around airports are commercial zoned, there is a high likelihood of additional lead sources beyond that of aircraft emissions. In the study, “The Effect of Leaded Aviation Gasoline on Blood Lead in Children” it was found that 41% of airports had lead sources other than aircraft. Although this was accounted for in this study, it was not accounted for in “A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels”, which puts those results into question. In all likelihood 41% is a low estimate, since accounting for all sources would be difficult. The “shock” method used in the study that did account for other potential sources, utilizing the air traffic lapse after the events of 9/11, wouldn’t be able to account for the fact that contaminants often take months or years to enter the surrounding populace’s blood.

Response to Comments in Opposition to the Endangerment Finding

One commenter asserts that there appear to be no epidemiological studies regarding exposure to leaded avgas, at least in Alaska, and perhaps none for the United States. The commenter also asserts that there is no proof that leaded avgas has any detrimental effect on people living near Alaska’s airports and argues that this is especially important considering that aviation and the related leaded avgas provide basic access to remote communities that are not connected to the road system. The commenter asserts that Alaska will be disproportionately impacted by any ruling on leaded avgas and further argues that for that reason any population or epidemiological studies being used to support rulings should contain Alaska-specific data. The comment further asserts that many of the studies being used to support the proposed decision do not contain data from Alaska.

In response to the commenter’s assertions regarding the absence of epidemiological studies regarding exposure to leaded avgas in Alaska, or perhaps in the U.S., the EPA notes that three epidemiologic studies of populations residing near airports where covered aircraft operate were described in Section II.A of the proposal and final notice, and one additional such study (Zahran, 2022) is cited in Section II.A of the final notice. Three of these studies report positive associations of children’s blood lead levels with proximity to airports and activity by covered aircraft,^{11,12,13} thus indicating potential for children’s exposure to lead from covered aircraft engine emissions. One of these studies evaluated cardiovascular mortality rates in adults 65 and older living within a few kilometers and downwind of runways found higher mortality rates

¹¹ Miranda et al., 2011. A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels. *Environmental Health Perspectives*. 119:1513–1516.

¹² Zahran et al., 2017. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. *Journal of the Association of Environmental and Resource Economists*. 4(2):575-610.

¹³ Zahran et al., 2022. Leaded Aviation Gasoline Exposure Risk and Child Blood Lead Levels. *Proceedings of the National Academy of Sciences Nexus*. 2:1-11. Although published after the publication of the proposal, this study was mentioned in comments submitted during the public comment period and the results are generally consistent with the studies cited in the proposal.

in adults living near single-runway airports in years with more piston-engine air traffic, but not in adults living near multi-runway airports, suggesting the potential for adverse adult health effects near some airports.¹⁴ These studies were conducted in the continental U.S., and the commenter provides no rationale or information indicating that the results of these studies would not be relevant to airports or people in Alaska. The commenter does not provide any scientific or technical rationale for the assertion that any population or epidemiological studies being used to support rulings should contain Alaska-specific data. The commenter also does not provide any scientific or technical rationale for the statement that epidemiological studies need to be done that include Alaska's rural residents who live near Alaskan airports. Furthermore, nothing in section 231 of the CAA predicates an endangerment finding on the availability of epidemiological or population studies, much less upon the availability of such information from a particular geographic area within the U.S.

With regard to the commenter's statement that many of the studies being used to support the decision do not contain data from Alaska, to the extent that this comment relates to the endangerment finding, the EPA notes that in finding that the lead air pollution may reasonably be anticipated to endanger the public health and welfare, the EPA relies on the extensive scientific evidence critically assessed in the 2013 Integrated Science Assessment for Lead and the previous Air Quality Criteria Documents for Lead, which the EPA prepared to serve as the scientific foundation for periodic reviews of the National Ambient Air Quality Standards for lead.^{15,16,17,18} This information, described in Sections IV.A and IV.B of the final notice, has been amassed over decades and rigorously peer reviewed by the Clean Air Scientific Advisory Committee, as well as undergoing extensive review by EPA and the public. The information that is reviewed, synthesized and evaluated in the 2013 Integrated Science Assessment for Lead and the previous Air Quality Criteria Documents for Lead is not limited in relevance to a specific population or location, and these documents provide the scientific basis for the corresponding review of the lead NAAQS, which are established to provide requisite protection of public health and welfare for the nation as a whole, not with respect to a particular geographic area. Additionally, the commenter provides no rationale or information that would indicate that the information and data in the 2013 Integrated Science Assessment for Lead and the previous Air Quality Criteria Documents for Lead are not relevant to the population in Alaska. To the extent the commenter is asserting that data from Alaska are needed to support the cause or contribute finding, EPA's response is in Section 6.2.5 of this document.

In response to the comment that there is no proof that leaded avgas has any detrimental effect on people living near Alaska's airports, the EPA interprets this comment to pertain to lead emissions from covered aircraft. To the extent the commenter is arguing that there needs to be proof of actual harm before finding endangerment, we note that, as described in Section III.A of the final notice, in accordance with the EPA's interpretation of the text of CAA section 231(a)(2)(A), the phrase "may reasonably be anticipated" and the term "endanger" in section 231(a)(2)(A) authorize, if not require, the Administrator to act to prevent harm and to act in conditions of uncertainty.¹⁹ They do not limit him to merely reacting to harm or to acting only when certainty has been achieved; indeed, the references to anticipation and to endangerment imply that the failure to look to the future or to less than certain risks would be to abjure the Administrator's statutory responsibilities. As the D.C. Circuit explained, the language "may reasonably be anticipated to endanger public health or welfare" in CAA section 202(a) requires a "precautionary, forward-looking scientific judgment about the risks of a particular air pollutant, consistent

¹⁴ Klemick et al., 2022. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. *International Journal of Environmental Research and Public Health*. 19(10):5941.

¹⁵ EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

¹⁶ EPA (2006) Air Quality Criteria for Lead. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

¹⁷ EPA (1986) Air Quality Criteria for Lead. EPA, Washington, DC, EPA-600/8-83/028aF-dF, 1986.

¹⁸ EPA (1977) Air Quality Criteria for Lead. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

¹⁹ See 81 FR at 54435 (Aug. 19, 2016).

with the CAA’s precautionary and preventive orientation.”²⁰ The court determined that “[r]equiring that the EPA find ‘certain’ endangerment of public health or welfare before regulating greenhouse gases would effectively prevent the EPA from doing the job that Congress gave it in [section] 202(a)—utilizing emission standards to prevent reasonably anticipated endangerment from maturing into concrete harm.”²¹ The same language appears in section 231(a)(2)(A), and the same interpretation applies in that context. For these reasons, section 231(a)(2)(A) does not require EPA to prove that a detrimental effect is certainly occurring to make an endangerment finding, much less require that such a finding be predicated on proof that a particular source has a detrimental effect on people living in a particular part of the country. In addition, to the extent this comment is suggesting that the endangerment finding is or should be made for leaded avgas, it mistakenly conflates the endangerment and cause or contribute steps of the analysis, as described in greater detail in EPA’s response in Section 5.1 of this RTC to comments supporting an endangerment finding for leaded avgas. For the reasons described in that response, and Sections III.A, III.B and IV of the final notice, the analysis and determination on the endangerment prong of the analysis is focused on the lead air pollution.

In response to the commenter’s assertion that Alaska will be disproportionately impacted by any ruling on 100LL avgas, to the extent the commenter is referring to the findings finalized in this action, we do not agree that they will have a disproportionate impact on Alaska and the commenter has not provided any information relevant to the findings to support or substantiate this assertion. As described in the *Regulated Entities* section of the final notice, these findings do not themselves apply new requirements to entities other than the EPA and the FAA. As explained in greater detail in the final notice, including in Sections III.A and III.D, in this action, the EPA is addressing the predicate to regulatory action under CAA section 231 but neither proposed, requested comment on, nor is promulgating any standards in this action. To the extent that the comment is expressing concern about potential impacts that future standards might have on Alaska, such as on remote communities that are not connected to the road system, those concerns are premature and speculative; they are also outside the scope of this action, so require no further response. To the extent that this comment is suggesting that considerations of the potential regulatory consequences of these findings should be considered in deciding whether to finalize the findings, the EPA disagrees that those are permissible or relevant considerations. The EPA interprets the text of section 231(a)(2)(A) to “require a ‘scientific judgment’ about the potential risks ... to public health or welfare – not policy discussions”²² and bringing such policy considerations about potential regulatory consequences into the determinations regarding the findings would “muddle the rather straightforward scientific judgment about whether there may be endangerment by throwing the potential impact of responding to the danger into the initial question.”²³ As described in Section III of the final notice, in making these findings EPA is taking the same approach as it took in the 2009 Findings for GHGs under CAA section 202(a), consistent with its approach to the 2016 Findings for GHGs under section 231(a)(2)(A), given the similarities in statutory text between these two provisions.

In response to the comments stating that any realistic endangerment to the public from lead emissions has already been addressed, as lead emissions today are lower than lead emissions in the 1970s, or that there is a high bar to clear to making an endangerment finding, when viewed in context of past achievements, the EPA disagrees that the alleged efficacy of other “Executive Branch programs” in addressing an air pollution problem is a valid reason for declining to make an endangerment finding.²⁴

²⁰ *CRR*, 684 F.3d at 122 (internal citations omitted) (June 26, 2012).

²¹ *CRR*, 684 F.3d at 122 (internal citations omitted) (June 26, 2012).

²² *CRR*, 684 F.3d at 117-118 (quoting *Massachusetts v. E.P.A.*, 549 U.S. 497, 534 (2007)) (June 26, 2012).

²³ *CRR*, 684 F.3d at 118 (quoting the 2009 Findings, 74 Fed. Reg. at 66,515) (June 26, 2012).

²⁴ See *Massachusetts v. E.P.A.*, 549 U.S. 497, 533 (2007).

One commenter made several critiques of a study titled “A Geospatial Analysis of the Effects of Aviation Gasoline on childhood Blood Lead Levels” by Dr. Marie Lynn Miranda²⁵ that was cited in Section II.A of the proposal for this action. While the commenter recognizes that the Miranda et al., 2011 study found a statistically significant positive correlation between increased blood lead levels in children and their residential proximity within 500m of airports (compared to those that live further away), the commenter incorrectly states that the difference was only 0.034 µg/dL for the subjects living within 500 meters of the airport, which they note was 86 times smaller than the StdDev that is already present in the general population in the counties studied.²⁶ The commenter further states that this difference should not be considered a reasonable factor in endangering the health of the public; that the study mentioned that the likely practical significance of the increase in blood lead levels was low; that it is improbable that lead introduced from avgas would be a significant source that would push any individual above certain blood lead level thresholds; and that there is a high likelihood of lead sources beyond aircraft emissions, given the zoning around airports that was not accounted for in this study. The comment further asserts, incorrectly, that the study was unable, using a p value of 0.10, to statistically prove, after adjustment, that there was any increase of lead levels in blood samples for individuals living 501-1,000 m of the airport.²⁷ Another commenter states that while consumption or ingestion of lead is a hazard to humans, the “dose” is also of critical importance, without further elaboration as to how it might be judged. In response to these comments, we first note that to the extent they are premised on the idea that the endangerment finding needs to be based on statistical proof of harm to individuals living within a certain proximity to airports, EPA disagrees as described earlier in this response. To the extent that they are premised on the notion that this endangerment finding needs to be based on a particular degree of increase in blood lead levels or exceeding a particular dose or threshold blood lead level, we disagree. As described in Section III.B of the notice for this action, the Clean Air Act does not require the EPA to identify a precise numerical value or “a minimum threshold of risk or harm before determining whether an air pollutant endangers.”²⁸ Accordingly, the EPA “may base an endangerment finding on ‘a lesser risk of greater harm ... or a greater risk of lesser harm’ or any combination in between.”²⁹ Further, as described more fully in Section IV.A.2 of the final notice, while bioavailability of air-related lead is modified by several factors in the environment, it is well-documented that exposures to lead associated with air lead sources can result in increased blood lead levels, particularly for children living near large air lead sources. These comments do not present any information to contradict that information, nor do they present any critiques of the other study cited in Section II.A of the proposal for that reported positive associations of children’s blood lead levels with proximity to airports and activity by covered aircraft.³⁰

Further, as points of clarification, in response to the comment highlighting consumption or ingestion of lead as a hazard to humans, we note that as described in Section IV.A.1 of the final notice that the multimedia distribution of lead emitted into ambient air creates multiple air-related pathways of human and ecosystem exposure, which include but are not limited to ingestion. With respect to the comment asserting that “A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead

²⁵ Miranda et al., 2011. A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels. *Environmental Health Perspectives*. 119:1513–1516.

²⁶ According to Miranda et al., 2011, the variation in children’s blood lead level associated with residing within 500m of an airport was 0.043 µg/dL, not 0.034 µg/dL as the commenter asserts, and was significant at the 5 percent level (p<0.05). See Table 3, p. 1515.

²⁷ Miranda et al., 2011, found that the variation in blood lead levels in children associated with residing between 501 and 1000m of an airport was 0.034 µg/dL and was significant at the 10 percent level (p<0.10). See Table 3, p. 1515.

²⁸ *CRR*, 684 F.3d at 122-123 (June 26, 2012).

²⁹ *CRR*, 684 F.3d at 122-123. (quoting Ethyl Corp., 541 F.2d at 18) (June 26, 2012).

³⁰ See 87 FR 62753, 62758, n.44 (October 17, 2022) (citing Zahran et al., 2017. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. *Journal of the Association of Environmental and Resource Economists*. 4(2):575–610).

Levels” mentioned that the “likely practical significance is low”³¹ in regard to the statistically significant higher blood lead level concluded for the children living within 500m of the airports studied, we note that the study does not include that statement about practical significance. Rather, the study states that “[a]lthough the estimated increase was not especially large, the results of this study are directly relevant to the policy debate surrounding the regulation of leaded avgas,”³² suggesting that the authors believed the study results had practical significance. We additionally note that it is not clear whether or how the commenter’s assertions related to the likely presence of additional sources of lead near airports in the Miranda et al. 2011 study or the likelihood that exposure to lead from avgas would push any individual over certain blood lead level thresholds are intended to relate to the endangerment finding, as the comment seems to mistakenly conflate the endangerment and cause or contribute findings, which as discussed more fully in EPA’s response in Section 5.1 of this RTC document and in the final notice (including in Sections III.A and III.B) are separate and distinct findings. However, to the extent that these arguments are directed at the endangerment finding, the comment is misplaced, given that, as described more fully in Section III.A and Section III.B of the final notice, the endangerment analysis under section 231(a)(2)(A) of the CAA is focused on determining whether the relevant kind of air pollution (here, lead air pollution) may reasonably be anticipated to endanger public health or welfare, and is not focused on a particular source category. To the extent these arguments are focused on the cause or contribute finding, the comment is similarly misplaced, because, as described more fully in Sections III.A, III.B and V.C of the final notice, the cause or contribute analysis under section 231(a)(2)(A) of the CAA is focused on whether emissions of an air pollutant cause or contribute to the relevant air pollution (not a particular blood lead level or specific health effect). Further, as noted section 5.1 of this RTC document, these findings are not a risk assessment regarding the potential human health or welfare harms for those living in close proximity to airports where lead emissions occur. To the extent that the commenter suggests that such considerations need to be taken into account when “balancing” the potential risk of aircraft operation and economic impact that regulating the lead content in avgas might cause, we note that such balancing is not relevant for an endangerment finding, which as described earlier in this response, is to be based on a scientific judgment about the potential risks to public health or welfare.

The EPA notes that the responses in this section are focused on the aspects of the comments that relate to the endangerment finding. Responses to other aspects of these comments can be found in other sections of this document. For example responses to: comments regarding environmental justice and equity are in Section 3, children’s health and their potential exposures near airports where covered aircraft operate, are in Section 4, comments regarding emissions of lead at airports in specific communities are addressed in Section 6.1, comments regarding the EPA’s model-extrapolation analysis of lead concentrations at airports are addressed in Section 6.2.4, comments requesting monitoring in communities near airports are addressed in Section 8.2.1, comments requesting education and outreach are addressed in Section 8.2.2, the response to comments regarding the FAA’s duties are addressed in Section 8.3, the response to comments regarding the cost of creating new aircraft fuels and reengineering aircraft engines to accommodate new fuels are addressed in Section 8.4, and comments regarding unleaded fuel alternatives and engines that can operate on unleaded avgas are addressed in Section 8.5.

³¹ Comment EPA-HQ-OAR-2022-0389-0206-0011.

³² Miranda et al., 2011 at p. 1514.

Section 6. Comments on the Cause or Contribute Finding

6.1. Comments Expressing Support for the Cause or Contribute Finding

6.1.1. Aircraft Lead Contributions to the Inventory of Lead Released to Air and Concentrations of Lead in Air

Comment Number: EPA-HQ-OAR-2022-0389-0238-0001

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The undersigned local and regional government agencies hereby submit this public comment in support of the U.S. Environmental Protection Agency’s (“EPA”) proposed finding that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. As agencies charged with protecting the public health, safety, and welfare, we share a serious concern over the continuing and irreversible damage that lead air pollution from leaded aviation gasoline (“avgas”) inflicts on our constituents – particularly to the health and development of exposed children, the safety of airport workers, and the welfare of already overburdened airport-adjacent communities. Leaded avgas exposure also burdens public agencies responsible for administering public health, safety, and social safety net services that serve exposed populations, while compromising the safe operation of the many publicly owned airports. Eliminating lead air pollution from avgas nationwide lies within the purview of the EPA and should be treated as an urgent public health and environmental justice priority of this Administration. We commend the EPA on taking this necessary and long overdue step toward regulating lead emissions from piston-engine aircraft and urge it to finalize its proposed endangerment finding with haste.

Comment Number: EPA-HQ-OAR-2022-0389-0241-0001

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles, CA, Board of Supervisors

Excerpt Text:

We urge the United States Environmental Protection Agency (EPA) to adopt the finding it published on October 17, 2022, that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare (the Endangerment Finding).

Our Board approved a motion on January 10, 2023, urging the EPA in compliance with published requirements, to eliminate lead from aviation gasoline and supporting the EPA’s strong endangerment finding on leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0247-0001

Commenter Type: Local Government

Commenter:

Organization: Winthrop Board of Health

Excerpt Text:

As Chair of the Winthrop Board of Health, I am concerned about lead emissions from certain aircraft engines that cause or contribute to lead air pollution from Boston’s Logan International Airport which is adjacent to our community.

I am pleased that the EPA is proposing to find that lead emissions from certain aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.

Comment Number: EPA-HQ-OAR-2022-0389-0247-0004

Commenter Type: Local Government

Commenter:

Organization: Winthrop Board of Health

Excerpt Text:

The EPA has issued a proposed determination that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.

We support this proposed action that encompasses both proposed endangerment and proposed cause or contribute findings.

Comment Number: EPA-HQ-OAR-2022-0389-0263-0001

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles CA, Board of Supervisors

Excerpt Text:

We urge the United States Environmental Protection Agency (EPA) to adopt the finding it published on October 17, 2022, that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare (the Endangerment Finding).

Our Board approved a motion on January 10, 2023, urging the EPA in compliance with published requirements, to eliminate lead from aviation gasoline and supporting the EPA’s strong endangerment finding on leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0013

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

B. Lead Emissions from Aircraft Contribute to Harmful Lead Air Pollution.

EPA proposes to find that lead emissions from “covered aircraft”—defined to mean all aircraft and ultralight vehicles equipped with “any aircraft engine that is capable of using leaded aviation gasoline,” [Footnote 83: 87 Fed. Reg. at 62,754.] the vast majority of which are piston-engine powered [Footnote 84: Id. at 62,778 (“The vast majority of covered aircraft are piston-engine powered.”)]. — cause or

contribute to air pollution that is reasonably anticipated to harm public health and welfare. This conclusion is also supported by ample evidence, and it must be finalized.

Emissions from piston-engine aircraft contribute roughly 70% of lead released domestically into the atmosphere. [Footnote 85: Transp. Rsch. Bd., Nat'l Acads. of Scis., Eng'g, & Med. et al., Options for Reducing Lead Emissions from Piston-Engine Aircraft 46 (2021), <https://www.nap.edu/read/26050/chapter/5>.] In prior endangerment findings, EPA has found that air pollution from a specific source “contribute[s]” to air pollution that may endanger public health or welfare at much lower relative contribution levels—at levels less than 3% of the total inventory of emissions. [Footnote 86: See 75 Fed. Reg. at 22,445 (“EPA has found that air pollutant emissions that amount to 1.2 percent of the total inventory met the statutory test for contribution, triggering EPA’s regulatory authority.” (citing Bluewater Network, 370 F.3d at 15)); 81 Fed. Reg. at 54,461 (finding that “the collective GHG emissions from the classes of engines used in U.S. covered aircraft clearly contribute to endangering GHG pollution, whether the comparison is . . . to domestic GHG inventories . . . representing 2.8 percent of total U.S. emissions [or] to global GHG inventories. . . [representing] 0.4 percent of all global GHG emissions”).] Where, as here, emissions from aircraft operating on leaded avgas make up the vast majority of domestic lead air pollution, it would be arbitrary and capricious for EPA not to finalize its “cause or contribute” finding.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0017

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Decades of research make clear that lead air pollution is harmful to human health and the environment and that it endangers public health and welfare. Lead emissions from piston-engine aircraft—the largest remaining source of atmospheric lead emissions in the United States—contribute to this harmful air pollution. EPA must finalize its Proposed Endangerment Finding and move on to the next step of regulating these emissions and eliminating this source of toxic pollution. [Footnote 100: Arguments related to potential costs of compliance that could result from some hypothetical future regulations are irrelevant at this stage, at which EPA’s mission is solely to consider whether it has a scientific basis for its finding. See Coal. for Responsible Regul., 684 F.3d 102. EPA would not be complying with the Clean Air Act if it considered such arguments in determining whether it should finalize its endangerment finding.]

Comment Number: EPA-HQ-OAR-2022-0389-0268-0020

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

II. EPA’s Proposed Endangerment Finding Is Based on Years of Research, and There Is Ample Evidence Supporting Both Prongs of the Endangerment Finding.

There is ample evidence to support both prongs of the section 231(a)(2)(A) endangerment finding for lead emissions from aircraft operating on leaded avgas: first, that lead air pollution may reasonably be anticipated to endanger the public health and welfare, and second, that lead emissions from engines of certain aircraft cause or contribute to this lead air pollution. [Footnote 44: See 87 Fed. Reg. at 62,773 (explaining that EPA “is using the same approach of applying a two-part test under section 231(a)(2)(A) as described in the [final greenhouse gas findings in 2016] and is relying on the same interpretations

supporting that approach”).] Indeed, EPA has long known that exposure to lead—including and especially airborne lead—is dangerous, and it has recognized for more than a decade that there is no safe level of lead and that any lead in the human body is dangerous. It is also clear that lead emissions from piston-engine aircraft contribute to lead air pollution; such lead emissions are responsible for approximately 70% of lead emitted domestically into the atmosphere each year. And recent research demonstrates that the lead emitted from piston-engine aircraft get into the blood of children living in proximity to airports where these aircraft operate, directly contributing to the harm faced by children with any level of lead in their blood.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0003

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

There is no doubt that airborne lead emissions from piston-engine aircraft contribute to this toxic lead exposure and that EPA must take urgent action to address the public health crisis facing children across the country. Multiple studies confirm the link between leaded aviation gasoline or AVGAS used in piston-engine aircraft and lead contamination in humans.

Comment Number: EPA-HQ-OAR-2022-0389-0243-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Law Foundation of Silicon Valley

Excerpt Text:

Although lead has been banned in products such as paint, leaded aviation gasoline continues to be “the largest remaining source of lead emissions in the U.S.” [Footnote 4: <https://www.sccoe.org/Documents/Whitepaper%20Children%27s%20Exposure%20to%20Lead%20in%20Santa%20Clara%20County.pdf>] Exposure to lead is correlated with proximity to small airports, and three million children in the U.S. currently live within 1,000 meters of an airport with lead-fueled airplanes.[Footnote 5: Id.] Given the ongoing threat to public health from leaded aviation fuel, the EPA urgently needs to move forward with their proposed endangerment finding and prevent at-risk communities from suffering further lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0020

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Elsewhere, in Lancaster County, the Lancaster Airport is the state’s fourth highest lead-emitting airport and it is within one mile of three schools and several residential communities. According to a 2022 report published by the American Lung Association, Lancaster County residents experience a high number of unhealthy air days. Further, the lead pollution from avgas will adversely affect nearly 90,000 residents with various health conditions related to air pollution, including pulmonary or respiratory illness like asthma or chronic obstructive pulmonary disease.[Footnote 44: American Lung Association, State of the Air (2022), <https://www.lung.org/research/sota/city-rankings/states/pennsylvania/Lancaster.>]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0013

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

Under section 231 of the Clean Air Act, a pollution source need not be a “major” source of dangerous air pollution nor even make a “significant” contribution to it to satisfy the cause or contribute prong of the endangerment determination.[Footnote 51: Endangerment Finding, 87 Fed. Reg. at 62774 (citing 81 Fed. Reg. at 54438 (Aug. 15, 2016)).]As the single largest source of lead air pollution in recent years, leaded avgas far exceeds this threshold. Leaded avgas is used by between 170,000[Footnote 52: Id. at 62759] and 220,000[Footnote 53: Eliminate Aviation Gasoline Lead Emissions (EAGLE), What do I need to know about EPA’s Proposed Endangerment Finding for Lead Emissions from Piston Aircraft?, FAA at 1 (Oct. 13, 2022).] piston-engine aircraft operating out of 20,000 airports spread across the country.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0011

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

2. New Jersey

In the State of New Jersey, airports that service piston-engine planes produce large amounts of lead emissions. According to EPA’s emissions data for 2017, New Jersey ranks 28th in the nation for total lead emissions generated from the aircraft sector, and six of the state’s general aviation airports produced more than 2,000 pounds of the state’s total airport-lead emissions in 2017.[Footnote 38: EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (using Sector Summaries Data Query information for mobile aircraft lead emissions and national lead emissions for all sectors and Point Source Data).]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0013

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

New York

Airport operations, especially leaded avgas, is the primary source of air-based lead emissions in the State of New York. Every year, airport operations result in 13,279 pounds of lead emissions in New York, which accounts for over 80 percent of all lead emitted into the air in the state. According to EPA’s 2017 National Emissions Inventory, New York has 590 airports with leaded avgas emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0017

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Pennsylvania

The Commonwealth of Pennsylvania produces a substantial amount of lead emissions due to the vast number of airports servicing piston-engine planes. According to EPA's emissions data, Pennsylvania has 51 general aviation airports operating piston-engine planes that are located within one mile of a community with at least 1,000 people. Five of these airports were responsible for nearly 2,000 pounds of the state's airport-lead emissions in 2017.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0021

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Wisconsin

The State of Wisconsin has 90 general aviation airports,[Footnote 45: State of Wisconsin Department of Transportation, Airport Information, <https://wisconsin.gov/pages/travel/air/airport-info/default.aspx>.] and roughly 80 percent of Wisconsin's lead air emissions come from the general aviation sector.[Footnote 46:]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0007

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Avgas Poses Serious Public Health Harms for States.

Lead pollution from avgas is a grave public health concern for every jurisdiction in the country. An analysis of state level data offers insight into communities potentially affected by lead pollution from avgas and the cumulative effect of these lead emissions in each state.

Below are summaries of state level data for states with some of the highest airport-lead emissions. These summaries underscore the importance of the Proposed Endangerment Finding and the need for prompt and effective regulation of leaded avgas.

1. California

The general aviation sector in the State of California produces the most lead emissions of any jurisdiction in the country. The most recent emissions data from EPA shows that piston-engine planes operating from California airports released more than 100,000 pounds of lead in 2017, and at least two airports in the state are on the precipice of exceeding federal air quality standards for lead.[Footnote 29: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (using Sector Summaries Data Query information for mobile aircraft lead emissions by state).] California has 452 general aviation airports, which are responsible for 83 percent of the state's lead emissions.[Footnote 30: Santa Clara University and Center for Environmental Health (2017), Unleaded Aviation Fuel: Barriers to Adoption in California,

https://cagelfa.com/SCU%20Unleaded_Avgas_Capstone.pdf#:~:text=Unleaded%20Aviation%20Fuel%3A%20Barriers%20to%20Adoption%20in%20California,use%20it%2C%20with%20about%202%2C000%20added%20every%20year4.

Comment Number: EPA-HQ-OAR-2022-0389-0258-0002

Commenter Type: State Elected Official

Commenter: Joan Lovely

Organization: Commonwealth of Massachusetts, Senate

Excerpt Text:

While we have removed lead from most products because of the many known dangers, its use has continued in aviation fuel. For those who live close to the airports serving this fleet, this poses serious health concerns. According to a 2016 study from the Agency, piston-engine aircraft, those commonly found flying out of small, regional airports, are the largest source of airborne lead in the country. These small airports are nestled into communities and neighborhoods, meaning that in addition to those working in the airport, neighbors, including small children, are living with constant lead exposure simply through the normal use of their homes and neighborhoods.

In the Second Essex Massachusetts State Senate District, which I am proud to represent, Beverly Airport has seen a sharp uptick in airplane traffic over the last two years. From 2020 to 2022, there has been a 29% increase in the number of flights to and from the airport. This increase brings more exposed of leaded fuels to the people of Beverly, Danvers, and Wenham, which surround the airport. There is no safe level of lead exposure. To allow the continued use of leaded fuels in these aircraft places those communities at an unfair risk of long-term health concerns and threatens the future generations of those communities. I urge the agency to designate leaded aviation fuel as a danger to the public health and welfare so that it may be appropriately regulated to ensure the health and safety of our residents.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Petitioners support EPA's Proposed Endangerment Finding and appreciate that EPA is finally moving forward to address this significant source of lead exposure. Lead emissions from the approximately 167,000 piston-engine aircraft that still use leaded avgas account for the most significant source of lead released in the United States' atmosphere. EPA has known about the dangers of leaded gasoline since at least the 1970s, when it first acted to get leaded gasoline out of the country's cars, and it has known for over a decade that any amount of lead in people's bodies is linked to serious health effects. Research demonstrates that lead emitted by piston-engine aircraft using leaded avgas is linked to higher blood lead levels in children living near airports where these aircraft operate. The science is clear: Lead emissions from piston-engine aircraft endanger the public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0215-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

A review of the 2017 Environmental Protection Agency (EPA) National Emissions Inventory (NEI) reveals that there are 180 facility sources of lead in San Diego County. Fifty-one are airports which are cumulatively responsible for releasing 4662 lbs., 2.3 tons, of lead into the air every year. Nine of the top ten lead polluters are airports and one is a military base. All are taxpayer-subsidized facilities. Airports owned and operated by San Diego County municipalities are far and away the biggest lead polluters in this jurisdiction.

The following pie chart identifies the various sectors listed in the 2017 EPA NEI responsible for lead pollution in San Diego County – a total of 5300 lbs., 2.65 tons per year. Mobile aircraft release 88% of all lead emissions in this jurisdiction. Lead emission data in the 2017 NEI reveals that nationwide 468 tons of lead were released into the air every year. As shown in the pie chart below, aircraft sources are responsible for seventy percent of that amount. In San Diego County, the contribution of aviation to airborne lead pollution is 18 percentage points higher than the national average.

[See original attachment for Pie Charts: Lead Emissions by Sector- San Diego County and Lead Emissions by Sector – Normal]

See two 2017 EPA NEI screenshots in the Sources section for a more detailed accounting of lead emissions by sector.

Largest Facility Sources of Lead in San Diego County

The following bar chart shows the top 10 facility sources of lead emissions in San Diego County.

[See original attachment for bar graph titled: San Diego Lead Sources – Lead Emissions (lbs)]

Two City of San Diego owned and operated airports are among the top 10 lead polluters. Montgomery-Gibbs, the largest facility source of lead in the county, pumps 1176.6 lbs of this toxin into the air every single year and Brown Field Municipal, the sixth ranked lead polluter in the county, releases 450.4 lbs of lead annually. These two city-owned airports combined release 1627 lbs, more than three-quarters of a ton, of lead into the environment each year.

Five of the eight airports owned and operated by the County of San Diego are also among the top 10 lead polluters. Gillespie Field in second place comes in at 1145.9 lbs, McClellan-Palomar ranked third, emits 719.2 lbs, Ramona in fourth place releases 660.9 lbs, Fallbrook Community at 140.8 lbs is seventh, and Borrego Valley at 80.2 lbs is ninth. These five airports combined release a total of 2,747 lbs of lead into the air every year.

[See original attachment for bar graph titled: San Diego County Owned Airports Cumulative Lead Emissions {2778.41 LBS} – 2017 EPA NEI]

The Camp Pendleton Military Base in fifth place adds an additional 477.9 lbs. while the San Diego International Lindberg ranked eighth, contributes 91.5 lbs. In tenth place at 66.5 lbs. of lead emissions is Oceanside Municipal which according to the FAA is owned by the City of Oceanside.

These 10 sources alone release 5009.9 lbs., more than two-and-one-half tons, of lead into the air every single year.

It is also worth noting that four of the airports discussed above – Montgomery-Gibbs, Gillespie Field, McClellan Palomar and Ramona – are among the top 50 lead polluting airports in the U.S.

Closing Comments

So how do the county supervisors, city council members, mayors and government entities reconcile their promotion and advocacy for these toxic airports with their responsibility to protect the health and well-being of the greater population, especially knowing that these facilities produce a number of adverse health impacts due to lead emissions, heightened ozone levels, noise and other pollutants? Only one of

San Diego County's 51 airports provides scheduled commercial airline passenger service – San Diego International. Though a source of PM2.5 and ozone, jets do not use leaded aviation fuel. However, the piston-engine aircraft that fly in and out of these facilities do. The major lead polluters in San Diego County are general aviation airports that primarily serve the interests of flight training schools, private pilots, charter companies, air taxis, corporate jets and other for-profit aviation businesses. They exist to serve an affluent few---the less than one-quarter of one percent of the U.S. population certified to pilot piston-engine aircraft. The vast majority of people living in San Diego County do not use these highly polluting municipality-owned and operated airports. They are, however, negatively impacted by the pollutants produced by the aircraft flying in and out of these facilities.

Sources

EPA NEI 2017 - San Diego County Lead Emissions by Sector.

[See original attachment for screenshot of 2017 NEI Data – Search Results]

EPA NEI 2017 – Top 20 Lead Emission Facility Sources in San Diego County. Fifteen, 75%, are airports.

[See original attachment for 2017 NEI data screenshots]

Attachment 2 - Article titled "Aircraft – Top Source of Airborne Lead Pollution in the U.S., in Oregon and in Washington County"

Attachment 3 - Article titled "What Pilot Shortage???"

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-005-0002

Commenter Type: Advocacy Organization

Commenter: Christian Poulsen

Organization: Duwamish River Community Coalition

Excerpt Text:

Piston engine aircraft traffic accounts for half of the nation's annual airborne lead emissions. With KCIA alone responsible for nearly 800 pounds of local lead pollution as of 2017. This issue has been compared to the Flint Water Crisis in severity and represents a potential ongoing mass lead poisoning event happening in real time undetected. The vast majority of hours and flights flown in piston-engine aircraft are for recreational purposes or training people to fly recreationally both nationally and locally.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0009

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

The damaging effects of leaded avgas pollution are not limited to overburdened communities. The Reid-Hillview Airport, a county airport ten miles southeast of San Jose International, ranks ninth in the state for airport-lead emissions but has recorded lead concentration levels that exceed federal air quality standards for lead.[Footnote 32: EPA (2020), Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports at 59-60, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>. The Reid-Hillview Airport is in a census tract that has a relatively low pollution burden.] Children growing up near this airport are exposed to uncharacteristically high levels of lead emissions from avgas. [Footnote 33:

Children living and attending school near the Montgomery-Gibbs Airport in San Diego are similarly at risk of elevated blood lead levels despite living in a part of the state with a relatively low pollution exposure/burden. The Montgomery-Gibbs Airport is the third largest lead-emitting airport in the state, and piston-engine planes operating out of the airport produce 1.5 times more annual lead emissions than Reid-Hillview.]

Comment Number: EPA-HQ-OAR-2022-0389-0214-0004

Commenter Type: State Government

Commenter:

Organization: State of California, Department of Public Health (CDPH)

Excerpt Text:

The California Department of Public Health (CDPH) supports EPA making an endangerment finding on the basis that leaded aviation gas (AvGas) is a major source of lead air emissions and such emissions can be a significant source of childhood lead exposure.

California has a third more general aviation airports than any other state outside Alaska. At least 160 general aviation airports in California currently advertise the sale of AvGas for aircraft and an equal number likely do so on-site.

The AvGas problem in California has been long-standing. EPA modeling of emissions from the Van Nuys airport in 1972 concluded that lead emissions from piston engine aircraft at such general aviation airports were roughly ten times greater than lead emissions at commercial air carrier airports and potential problems could arise as a result. In the following decade, the number of piston engine aircraft jumped as 100,000 such planes were sold nationwide. By 2002, Van Nuys Airport had the highest lead emissions of any airport in the U.S. closely followed by the Santa Monica Airport. The result is that California has more lead emissions (i.e., >50 tons a year) from AvGas than any other state.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0015

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

As a scientist, registered geologist and registered professional engineer with nearly 45 years of experience, these historic and ongoing wanton and willful emissions and the associated exposures are something about which I sincerely care. These comments draw on my own personal experience with lead emissions from one particular flight school, that of Northwestern Michigan College (NMC), in Traverse City.

While NMC's flight school is but one player among many, the Federal Aviation Administration (FAA) and general aviation sector are the two principal players in this aviation-caused lead particulate exposure disaster that is ongoing and has gone on for far too long. The FAA and general aviation sector have presented, to my knowledge, zero science-based evidence to support any determination that these lead particulate releases and the associated exposures are innocuous, particularly as concerns children. As the EPA refines the proposed rule, I encourage the EPA Administrator and staff to specifically address the insidious nature, when it comes to lead particulate emissions and the associated exposures, of historic, current and future aviation flight school touch-and-go operations at the multitude of U.S. airports whose clients include approximately 1000 +/- flight schools.

Addressing past and ongoing lead particulate emissions and exposures caused by the general aviation piston-engine aircraft sector is long overdue. The FAA has been general aviation's handmaiden for going on four or more decades, working hand-in-hand with the sector to degrade the environment, degrade public health and subject many children and others to lead exposures. Further, let's call it what it is as far as lead particulate exposures to children are concerned: lead poisoning. All the while, for decades, the environmental and public health regulatory agencies have been hamstrung, such as by outdated regulations or by the actions and inaction of one or more branches of government.

This is the story of historic and ongoing lead emissions and presumable lead exposures in one community, Traverse City, Michigan. (To presume that there are no associated lead exposures, that the lead particulate emissions are carried away on the wind to Canada or some other distant place, or diluted to zero concentration by virtue of magical atmospheric processes is nonsense.) It is a case history concerning one individual's efforts to bring into the light of day, and more importantly to achieve reform and elimination of the lead emissions and exposures arising from NMC's flight school's half-century plus (still ongoing) of lead particulate emissions and the lead exposures associated therewith.

Additionally, I summarize the pathetic record of denial and non-response on the part of NMC representatives, elected and appointed officials, agency representatives, and representatives of the local news media (Traverse City Record Eagle). Finally, it is entirely appropriate that the potentially impacted individuals, if they wish, have their health evaluated, tested and monitored as appropriate and that these individuals be remunerated for any damage to their health incurred as a result of NMC's flight school's half-century-plus of lead particulate releases and lead exposures.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0001

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

My name is Ellen Saunders, I live west of Portland and west of Hillsborough. Hillsborough has a very large private airport that does a great deal of training and the training that is done for pilots is done on planes that use leaded gas. Unfortunately, not only is there a big pilot training program but our commercial pilot training dynamics are so great that we also have community schools, our PCC [Portland Community College] supports these trainings and the trainings go on, training people from out of the country, many of them from China, and other places. The training then goes from one airport at Hillsborough to one of several other local airports but they traverse the entire area of farmland between Hillsborough and these other locations including Scappoose Airport, and other airports in the area. And they fly not only low but they fly repeated circular patterns over and over and over again. They also do -- cut their engine dynamics as part of their training, so they are silenced for a minute and then the planes restart their engines so those of us that live west of Portland and west of the Hillsborough Airport are subject to constant barrages of leaded fuel using pilot training.

Comment Number: EPA-HQ-OAR-2022-0389-0207-0004

Commenter Type: Private Citizen

Commenter: Wisconsin Ecolatinos

Organization:

Excerpt Text:

- Morey Airport produces 32% of airborne lead emissions in Dane County. Dane County has the second-highest airborne lead emissions of all 72 counties in Wisconsin (WI DNR).

Comment Number: EPA-HQ-OAR-2022-0389-0211-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

According to the latest data from the National Emissions Inventory, 80% of annual lead air emissions in Wisconsin are from aircraft using leaded fuel. These emissions are largely coming from smaller airports dispersed throughout the state rather than being concentrated at the largest airports. For example, General Mitchell International Airport, the largest airport in WI, reports only the 24th most lead emissions from airports in the state. Of Wisconsin's 72 counties, 49 have at least one airport reporting at least 50 pounds of aircraft lead emissions, with Racine, Dane, Jefferson, Winnebago and Sauk counties having the most cumulative emissions from aircraft.

Comment Number: EPA-HQ-OAR-2022_0389-0741-0003

Commenter Type: Private Citizen

Commenter: Meghan Pierce

Organization:

Excerpt Text:

Aviation gasoline is the last transportation fuel that still contains lead, and it accounts for 80% of the lead pollution in Wisconsin's air every year.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0005

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

Since the release of the draft lead strategy on November 16, 2021, EPA has announced its intention to promulgate an endangerment finding for lead emissions from piston-engine planes burning leaded avgas [Footnote 6: EPA announced its plan to issue a proposed finding by the end of 2022 and a final finding in 2023. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/petitions-and-epa-response-memorandums-related-lead>]. CARB commends EPA for committing to promulgate this finding, which is many years overdue [Footnote 7: Advocates have been petitioning EPA for an endangerment finding for leaded avgas since 2006. See <https://www.epa.gov/sites/default/files/2016-09/documents/foe-20060929.pdf>]. It is patently clear that aircraft lead emissions “cause[], or contribute[] to, air pollution which may reasonably be anticipated to endanger public health or welfare[,]” [Footnote 8: 42 U.S.C. § 7571(a)(2).] which is the standard for an endangerment finding and the prerequisite to federal controls of these emissions [Footnote 9: Clean Air Act, Sec. 231, 42 U.S.C. § 7571(a)(2) (“The Administrator [of the EPA] shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.”)].

Comment Number: EPA-HQ-OAR-2022-0389-0241-0006

Commenter Type: Local Government

Commenter:**Organization:** County of Los Angeles, CA, Board of Supervisors**Excerpt Text:**

Every day, the communities surrounding the dozens of airports in Los Angeles County, and those who work in or near the airports, are being exposed to lead emissions in the air they breathe and will continue to be exposed until the EPA leads the effort to phase out leaded aviation gasoline. Five decades is far too long for vulnerable communities to wait to breathe cleaner air. For these reasons, we urge the EPA to adopt the Endangerment Finding. The phasing out of leaded aviation gasoline will ultimately create a cleaner and healthier environment for those living and working near airports.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0005**Commenter Type:** Advocacy Organization**Commenter:****Organization:** Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)**Excerpt Text:**

Project TENDR supports the finding of endangerment of lead in aviation fuel, since potential lead NAAQS exceedances and concerning risk from multi-media exposures resulted from the analysis even without all possible worst-case scenarios developed. The finding of a minimum use level of 0.1 tons per year could be lower dependent on the relative concentrations of gas phase lead versus particulate phase lead emissions. This is reaffirmed by our earlier assertion that an argument based on lead NAAQS exceedance is not fully protective of neurodevelopmental detriment since there is no safe level of lead exposure.

Comment Number: EPA-HQ-OAR-2022-0389-0250-0002**Commenter Type:** Private Citizen**Commenter:** Anita Wampole**Organization:****Excerpt Text:**

I have been extremely concerned about the low altitude recreational airplanes flying over my home from Morey Airport (a/k/a City of Middleton Municipal Airport-Morey Field or C29) for some time and, consequently, over the subdivision that I have lived in for 40 years. It seems to me that the planes have increased and have become louder and are flying lower. The concern over the lead emissions from their exhaust from leaded aviation gas and its' spewing over our heads each time a plane flies over is unnerving. It must effect the food I grow in my garden each year, the water I drink, the air I breathe, and the people, including all the children, who live here and in the areas surrounding Morey Airport. This was once a small plane airport in a rural setting but much residential growth has occurred around the area itself endangering more people, including this densley populated area comprised of residences, schools, playgrounds, parks and athletic fields.

I strongly support the EPA Proposed Lead Endangerment Finding for Leaded Aviation Gas and urge the EPA to make this proposal final this year on this urgent public health matter.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0014**Commenter Type:** Advocacy Organization

Commenter:**Organization:** Natural Resources Defense Council (NRDC)**Excerpt Text:**

The second inquiry requires only a contribution to emissions from certain classes of aircraft emissions. [Footnote 4: See 42 U.S.C. (Section) 7571(a)(2)(A).] “The ordinary meaning of ‘contribute’ . . . means simply ‘to have a share in any act or effect’ . . . or ‘to have a part or share in producing.’” [Footnote 45: *Bluewater Network v. EPA*, 370 F.3d 1, 13 (D.C. Cir. 2004) (quoting Webster’s Third New International Dictionary 496 (1993) and 3 Oxford English Dictionary 849 (2d ed. 1989)) (interpreting analogous provision under 42 U.S.C. (Section) 7547(a)(3)).] “The term “does not incorporate any ‘significance’ requirement.” [Footnote 46: *Id.* at 13, 15 (concluding 1.2-percent contribution to total daily carbon monoxide emissions inventory for given area was adequate to support EPA’s regulatory finding).]

Avgas is the single largest source of U.S. lead air pollution and, according to 2017 figures, accounted for 70 percent of U.S. lead air pollution. [Footnote 47: *Supra* at 3 & n.15.] Multiple studies confirm the link between general aviation airports and elevated blood lead levels in children living and attending school nearby.[Footnote 48: *Supra* section II.] The second inquiry of the endangerment finding test is thus also easily satisfied.[Footnote 49: See *Am. Lung Ass’n v. EPA*, 985 F.3d 914, 977 (D.C. Cir. 2021) (upholding EPA finding, under more stringent “significant contribution” framework, that source of one-third of U.S. greenhouse gas emissions was a “significant contributor to air pollution by any measure”), *rev’d on other grounds sub nom. West Virginia v. EPA*, 142 S. Ct. 2587 (2022).]

Comment Number: EPA-HQ-OAR-2022-0389-0263-0005**Commenter Type:** Local Government**Commenter:****Organization:** County of Los Angeles CA, Board of Supervisors**Excerpt Text:**

Every day, the communities surrounding the dozens of airports in Los Angeles County, and those who work in or near the airports, are being exposed to lead emissions in the air they breathe and will continue to be exposed until the EPA leads the effort to phase out leaded aviation gasoline. Five decades is far too long for vulnerable communities to wait to breathe cleaner air. For these reasons, we urge the EPA to adopt the Endangerment Finding. The phasing out of leaded aviation gasoline will ultimately create a cleaner and healthier environment for those living and working near airports.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0002**Commenter Type:** Private Citizen**Commenter:** Alex de Rege**Organization:****Excerpt Text:**

This proposed rule, which will find that lead emissions from specific aircraft engines are dangerous to public health and welfare, is a strong first step to reaching a just city and an equitable society. I would be hard-pressed to say that I am a chemist or have expertise in a field that could help me describe the exact processes that lead goes through when it enters into someone’s bloodstream, but the ill effects that lead has on public health and welfare are clear. It does not take a chemist to read the EPA’s proposed rule (and the reasoning behind it) and recognize the harms that lead poses to people’s health and how much aircraft engines that use leaded fuel contribute to air pollution. The proposal very clearly lays out why we must

find that aircraft engines that operate on leaded fuels do cause air pollution and that they pose a danger to public health and welfare.

Comment Number: EPA-HQ-OAR-2022_0389-0735-0001

Commenter Type: Private Citizen

Commenter: Michael McTernan

Organization:

Excerpt Text:

I live in Hillsboro, Oregon, two blocks away from an elementary school and less than one mile from the runway of HIO airport. This airport is the leading lead polluter in my state, dumping hundreds of tons of lead into our environment every year. This pollution, this poison, is something that will be with us forever, harming myself and my children, and their children. To allow airports to continue to pollute in this way is criminal. There are other options, and while they may cost more or be harder to implement, why should the entire county, and the United States in general pay the price, rather than the minuscule percentage of people who can afford to own their own planes? Allowing this cost to be passed on to the American people, especially the children who are disproportionately harmed by lead pollution, is cowardly and immoral. I urge you to make the easy and right decision here and ban leaded AV gas. The endangerment finding should be finalized and lead AV gas should be banned by the FAA immediately, not two years or ten years from now. Any lead that is dumped between now and the ban will remain a blight on our land and our legacy for generations to come. Please think of how you would feel if every time a plane flew over your house, dozens of times per day, all you could think about was how this would affect your children's development. Will it poison them? Can they play in the dirt outside? Did I make the wrong choice moving here? You could ease the minds of millions and save a generation from negative health effects with your decision. Please make the right and just choice. Below is the boilerplate, which I'm sure you've read a million times but I thought worth reproducing as the numbers speak for themselves.

Comment Number: EPA-HQ-OAR-2022-0389-0213-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

NESCAUM supports the Proposed Finding that emissions from certain aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0005

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

After reviewing the docket and associated references, the Band supports the EPA docket proposal to find that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may be reasonably anticipated to endanger public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0013

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Closure

Thus far, the NMC flight school management, NMC management & Trustees have responded with implicit or explicit statements of their entitlement to do what they do concerning NMC flight school operations and the corresponding lead particulate emissions and exposures. Traverse City Commissioners, the School District Board Members, FAA representatives, numerous State and County agency representatives, local media and others have responded thus far with silence when informed about probable NMC flight school lead particulate exposures in Traverse City neighborhoods that span nearly 55 years.

Given the entrenched attitudes at FAA and NMC of see nothing, hear nothing, say nothing, admit nothing and do nothing in this context, it is most fortunate that EPA has decided to address the lead endangerment posed by piston-engine general aviation aircraft in general, a significant number of which are used primarily for recreation, and is moving forward with its Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. For far too long NMC's pattern of willful airborne lead particulate emissions and the associated exposures directed against its neighbors and children in areas of the community has gone on without being contested, to my knowledge, by any party or addressed in any meaningful way by NMC. Also, there has been zero community notification to members of the public potentially impacted by these historic and contemporary lead particulate emissions and the associated exposures.

I join many in looking forward to and strongly support the adoption of EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare and thank you for the chance to comment.

Comment Number: EPA-HQ-OAR-2022-0389-0224-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: New Jersey Progressive Equitable Energy Coalition (NJPEEC)

Excerpt Text:

NJPEEC supports the Environmental Protection Agency's ("EPA's") Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare (hereinafter "Endangerment Finding"). [Footnote 2: Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, 87 Fed. Reg. 62,753 (Oct. 17, 2022) (to be codified at 40 C.F.R. Parts 87, 1031, and 1068), <https://www.govinfo.gov/content/pkg/FR-2022-10-17/pdf/2022-22223.pdf>.]

Comment Number: EPA-HQ-OAR-2022_0389-0324-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

So, in response to these Executive Orders, the EPA is trying to crack down on preventable public lead exposures found in the fuel of piston engines that are used for covered aircraft. To do so, the EPA is proposing to define "air pollution" that is referred to in section 231(a)(2)(A) of the CAA as lead/ lead air pollution along with the other elements already being regulated. This would allow the EPA to regulate the lead emissions like how they regulate other exhaust emission such as CO and NOx. This is an important step in reducing the amount of lead pollution because according to a study done by the EPA, it was found that the piston-engine emissions account for 70% of the total US lead inventory and cause nearly 500 tons of lead to be released into the air. This is also problematic because these smaller aircraft tend to fly at lower altitudes and take off and land over more densely populated areas.

Comment Number: EPA-HQ-OAR-2022_0389-0394-0001

Commenter Type: Private Citizen

Commenter: Brandon Restler

Organization:

Excerpt Text:

As has been found in the EPA's extensive research, lead air pollution from aircraft likely poses significant harms to communities. I wholeheartedly agree with the EPA's proposed rule to define lead as an air pollutant requiring aircraft regulation under section 231 (a)(2)(A) of the Clean Air Act.

Additionally, Executive Order 12898 directs federal agencies like the EPA to make achieving environmental justice part of their mission. Considering that communities located in close proximity to airports may be more likely to be people of color and/or low-income communities, this rule change would protect these communities from unjust lead pollution.

Comment Number: EPA-HQ-OAR-2022_0389-0645-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I live a block away from Whiteman Airport in Pacoima, CA. In the 9 years I have lived here, not only have 3 planes crashed exposing the entire neighborhood to burning leaded fuel, but the emissions from the constant stream of private planes flying in and out is so dangerous. We are subjected to this pollution and the constant noise of small planes and helicopters landing just to fuel up. This is a community and not an airplane pit stop for the elite. Will my future children be born with some sort of illness or deformity because this airport?

Comment Number: EPA-HQ-OAR-2022_0389-0649-0001

Commenter Type: Private Citizen

Commenter: Aaron Lucas

Organization:

Excerpt Text:

Any leaded gas can contribute to pollution. It is not at all unreasonable to assume that leaded gas in an

airplane causes lead pollution, and is harmful to public health. Regulating airplane fuel is necessary to the public health. If our cars cannot have leaded fuel, why should an airplane.

Comment Number: EPA-HQ-OAR-2022_0389-0685-0001

Commenter Type: Private Citizen

Commenter: SK Vargas

Organization:

Excerpt Text:

To whom it may concern, I am writing this comment to implore you and beg for your help and support. Lead fuel and their emissions are going to destroy Long Island and borderline communities in Queens, NY. The NEXGEN system provides for high volume landings which dump toxic emissions over our homes. Coincidentally, they land over the school I teach at. What I see there are a wide array of health concerns that have become increasingly serious as the frequency of planes/lead-carbon emissions increase. Many children in the community have processing issues, asthma, speech, and other neurodiverse conditions present. This doesn't require a study, a medical degree or special investigation. This just requires eyes and talking to the witnesses. So, it is logical that I would immediately become concerned when we uncovered that the new home we moved into is under the same landing pattern, only further east. I am worried because my husband, a lifelong athlete, fell ill with cancer. I'm worried that the noise and landings at 3 am will give me a heart attack one day. I'm worried that my 40-year-old neighbor who doesn't drink was diagnosed with a fatty liver. ALL of this has TONS of research to prove it. We need a priority transition to lead-free aviation fuel!! We need a recognition and information outreach to help people understand what's happened and what they should look for to fix. Please help us. Thank you for taking the time to read this.

Comment Number: EPA-HQ-OAR-2022_0389-0693-0001

Commenter Type: Local Government

Commenter:

Organization: Town of Danvers, Massachusetts

Excerpt Text:

At its meeting on December 20, 2022, the Danvers Select Board dedicated most of the night's discussion to issues in and around the Beverly Regional Airport (BVY), of which +140 acres sit in Danvers. Because our community is positioned under the vast majority of the runway flight patterns, Danvers also disproportionately bears the consequences of overflight issues, notably sources of environmental pollution. While several issues are at play, and noise pollution is also significant, leaded aviation fuel has quickly risen to the top of concerns. The FAA's plan to retire the product by 2030 is not aggressive enough, knowing what we do about the effects of lead on human development. As single-piston planes comprise half of all aircraft operations at BVY, the continued exposure to lead in the area around the airport must be urgently addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0703-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Geoffrey Swain

Organization:

Excerpt Text:

As a long-time public health physician with 30+ years' experience around issues of childhood lead

poisoning prevention, and as a long-time aircraft owner and pilot, I have perspectives that are likely to make people on all sides of this issue less than happy, but which may illustrate a practical path toward minimizing airborne lead exposures near busy airports as quickly as possible. Airborne lead emissions from small planes near busy airports ARE a serious public health problem.

Comment Number: EPA-HQ-OAR-2022_0389-0725-0001

Commenter Type: Private Citizen

Commenter: S. H.

Organization:

Excerpt Text:

There is NO "safe" level of lead exposure--that's why ground motor vehicles no longer use leaded fuel and why lead in paint is banned. Yet somehow, those, mostly small fixed wing aircraft pilots are so "special" that they're exempted from the ban on leaded gas and are free to fly over (frequently) densely populated areas. Why is ok for those pilots & fixed wing aircraft owners to expose children, pregnant women, birds, mammals et al to their leaded fuel exhaust?

Comment Number: EPA-HQ-OAR-2022_0389-0769-0003

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

I was an award winning photojournalist at the Los Angeles Times for 25 years and I won 3 team Pulitzers for my work with my colleagues. I now run my animal welfare nonprofit, CityTheKitty.org, to end the inhumane practice of declawing. Most importantly, I'm a mom with 5 yr old twins who are going to a school that is 1/3 mile downwind from the Long Beach airport. This school also has a continuous stream of planes flying over it every 3-4 minutes at around 260 ft that are practicing touch and go landings and spewing out lead emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0129-0002

Commenter Type: Private Citizen

Commenter: Jean Public

Organization:

Excerpt Text:

living near an aiaport is a real horror because of the lead deposition abndn thenoise of the airport. i lived near morristown airport nj and now near solberg airportin readington nj and they are full of small planes that i believe use leaded gasoline and i believe it is well pst time to stop the use of leaded gas since it is to destructie to have that lead on our children. this comment is for the public record please receipt. jean publicee jeanpublic1@gmail.com

Comment Number: EPA-HQ-OAR-2022-0389-0147-0003

Commenter Type: Private Citizen

Commenter: Elsa Keefe

Organization:

Excerpt Text:

“Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood” (Environmental Protection Agency, 2022). In order to fully understand the scope and effect lead emissions from aircrafts, the EPA must fully commit itself to investigating this concern. Throughout the entire United States, 40 million people live near major airports (Fisher, 2021). Lead is extremely toxic to humans and wildlife even at low doses. The health of airport workers, passengers, and communities around the airport depends on this decision. The most important step is to prevent lead exposure before it happens, which is why the EPA should investigate this potential public health concern.

References

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Fisher, B. (2021, June 15). Clearing the air | UW Civil & Environmental Engineering. UW CEE. Retrieved November 5, 2022, from <https://www.ce.washington.edu/news/article/2021-06-15/clearing-air>

Comment Number: EPA-HQ-OAR-2022-0389-0151-0001

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

My name is Jasmine, Jimenez my family and I have lived for approximately 43 years within one mile from Reid Hillview we have a child under 11 years old living in our household and we were not aware the planes are being operating with led fuels, we are very concerned about the caused damage to our health, the lead had done to our family especially our children and community.

Children are particularly vulnerable to the effects of lead. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory, and behavior. There is no known safe level of lead in the body." Furthermore internal damage to their vital organs.

Every day, East San Jose residents, pregnant women, children and adults are being slowly poisoned by led particles from exhaust of private planes, continually flying in circles, fuel spills at the airport and gas fumes escaping during refilling ,additionally there are 9 schools located within the flight pattern used by pilots while fling in circles

Reid Hilview is exposing East San Jose children, youth and the whole community to the noise, irritation, lead pollution, and lower standard of living that results from led exposure and the eminent danger for a plane crashing into our living spaces. East San Jose children and adults are being physically and mentally harm on a daily basis by the incessant noise from Reid Hillview planes.

This county land should be used in a way that benefits a larger percentage of county residents, while not exploiting ,abusing the life for other county residents and ignoring civil rights for our children and disadvantaged community . The county airport system just a welfare for the rich.

[Bold: stop thinking in terms of what is convenient for a recreational pilot and start thinking in terms as to what is best for East San Jose, and Santa Clara County.

We asked to have Reid Hillview closed immediately we can not afford waiting another 8-10 years for Reid Hillview airport to be closed and exposing our community for further health damage, inspire our East San Jose children to be a first-rate school system.]

Comment Number: EPA-HQ-OAR-2022-0389-0157-0002

Commenter Type: Private Citizen

Commenter: Richard Breyer

Organization:

Excerpt Text:

Hello, I am a Retired licensed Civil Engineer in the State of California. I worked for Caltrans for 34 years. I am concerned about the airplanes flying in and out of Palomar Airport using leaded fuel. I also have concerns that since leaded fuels at Palomar Airport have been used continuously for over 60 years that the soil in and around the airport contain high levels of lead. To my knowledge no ADL Soil testing has been done at or around the airport. I have asked the County of San Diego many times and have gotten no response. Existing soil is being disturbed regularly at the airport putting workers and possible citizens at risk. Hopefully this can also be looked into by your department.

Comment Number: EPA-HQ-OAR-2022-0389-0158-0002

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

According to Table 1- Piston-Engine Emissions of Lead to Air, as of 2017, piston-engines emissions account for 70% of the United State's lead emissions, contributing 470 tons each year. This number is steadily rising, despite the growing need for emissions mitigation in the ongoing international climate crisis. As recognized by the EPA, 47% of these lead emissions are emitted during the landing and takeoff cycles, meaning that, while a majority of pollution is still released throughout the flight, these emissions are more dispersed and therefore have more marginal effects on those living in flight paths. However, those living near airports experience a constant wealth of highly concentrated lead and air-pollution which can have drastic effects on their lives. As a person living near not one, but two highly trafficked airports, I am deeply concerned with the effects that lead and air-pollution emitted from these aircrafts will have on my health and the health of my community, especially those in my community who face marginalization or who are in early stages of development. The EPA also recognizes that, not only are these pollutants airbourne, but they can have impacts on soil, food, and aquatic environments which further degrades our environment, impacts our diets, and damages our health.

Comment Number: EPA-HQ-OAR-2022-0389-0159-0001

Commenter Type: Private Citizen

Commenter: B. J. Wilson

Organization:

Excerpt Text:

Lead is a highly toxic substance that poses a significant threat to the health of both humans and to the environment at large. As the Environmental Protection Agency notes in the extensive findings presented in this proposed regulation, airborne lead contamination from covered aircraft that use leaded fuel. The EPA notes in section II (a) (1) of the second part of this proposal that piston engine aircraft utilize a leaded fuel called avgas as their primary fuel. Lead is a particularly dangerous substance not only because it is toxic, but because it is persistent. Soil, water, or any surface contaminated by lead can remain contaminated for decades. As the EPA notes in section II of this report, airborne lead pollution, like that produced by leaded aircraft fuel, is particularly dangerous because not only does it contaminate the air, but airborne lead can be deposited in the soil and water, furthering lead pollution of the environment. Airborne lead pollution is by nature a highly distributable pollutant and as the EPA notes in the report can deposit inside buildings such as households near sites of contamination, in this case, airports.

Comment Number: EPA-HQ-OAR-2022-0389-0197-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: QuietFlorida.org

Excerpt Text:

Private jets, like NetJets, arriving and departing from Naples Airport are bombarding our skies with air and noise pollution. These aircraft are also flying at very low altitudes.

We have lived in the same home for 21 years and this all started 2.5 years ago. We live approximately 7 miles from airport but evidently, we are in a flightpath, which we did not know until 2.5 years ago. Air and Noise Pollution are destroying our lives. This must stop. We know this is bad for our health and for two years I have attempted to work with the airport. FAA seems to be stalling the changes needed to protect our rights.

We need to put a stop to the number of planes crop-dusting us with ultrafine particles and the constant noise causing cardiovascular issues, sleep disturbances, the inability to concentrate and more.

Naples Airport is in the middle of a populated area with four schools located in close proximity. The damage this is doing to humans and the environment is catastrophic.

Comment Number: EPA-HQ-OAR-2022-0389-0199-0003

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

Some communities are especially vulnerable to lead from avgas. For example, New Orleans (Jazz fest and French Quarter Fests) and Seattle (pontoon planes taking off from Lake Washington) are two urban areas with large numbers of urban flights by piston-engine aircraft. In New Orleans, I lived near the Fair Grounds and under the flight path where advertising planes circled during the entire festival. Now, I live in Seattle in the Brentwood-University District community of Seattle which is under the flight path of pontoon planes taking off and landing on Union Bay and Lake Washington. The flight path is directly over my home, Seattle Children's Hospital, and the home where my grandchildren live.

Comment Number: EPA-HQ-OAR-2022-0389-0222-0003

Commenter Type: Private Citizen

Commenter: Dorinne Tye
Organization:

Excerpt Text:

I understand egregious systemic maladies were in place before most of you who now represent the EPA were there, but it is past time to exercise the intent and authority of your agency and mandate an immediate discontinuation of this neurotoxic air pollutant distributed via ultrafine particulate matter.

Being exposed to lead is an unjust, unnecessary and cruel burden to place on our country, the collective IQ, citizens and especially children for non-essential activity, potentially causing irreversible lifelong injury to all life below and nearby. Please expedite the rule making and order an immediate discontinuation of all non-essential flight until transitioned.

I implore the EPA to return to your roots, which were NOT participatory with big pollution. Please do not allow one more day of underestimated cumulative impacts from piston engine lead, which benefit only a very tiny portion of individuals.

Comment Number: EPA-HQ-OAR-2022_0389-0599-0001

Commenter Type: Private Citizen

Commenter: Karen Stapelfeldt

Organization:

Excerpt Text:

As someone who lives directly under the flight path of a tiny rural airport, out of which fly only piston engine planes, the fact that the fuel for these planes is still leaded is frightening. I can envision the lead raining down on me as I'm hanging out the laundry and gardening. My husband and I live a very environmentally-clean life. Please do everything you can to eliminate this old standard that allows lead to dissipate into our lungs, onto our land, and into the surrounding waters. We have done so much to clean up our lives and our impact on the environment, only to have the local small planes rain lead where we are.

Comment Number: EPA-HQ-OAR-2022_0389-0529-0001

Commenter Type: Private Citizen

Commenter: Don Callahan

Organization:

Excerpt Text:

I am one of those people. We live close to a regional airport that has a lot of flight schools. We have small planes circling overhead all day, every day. We already have poor air quality and this makes it worse. I feel sorry for the thousands of people who actually live next to the airport and are subjected to pilots practicing landings and takeoffs all day.

Comment Number: EPA-HQ-OAR-2022_0389-0489-0001

Commenter Type: Private Citizen

Commenter: Mary Hollen

Organization:

Excerpt Text:

I am in favor of

<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.regulations.gov%2Fdocument%2FEPA-HQ-OAR-2022-0389-0001&data=05%7C01%7Coped%40seattletimes.com%7Cff994a13b2e34ab8a5fa08dadd5a7c2a%7Cfc2b8476b7f0473d82fbe0a89fd99855%7C0%7C1%7C638065677992652958%7CUnknown%7CTWFpbGZsb3d8eyJWlIjojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=4rl0LPqS%2B1a%2Fc6hW7%2F7oOvhiLFhZSKd6g1tHD4vpwUM%3D&reserved=0>

identifying lead based aviation fuels as hazardous to my health. I am a severe asthmatic living beneath the flight path of small propeller planes flying from Boeing, Renton, and Crest to destinations in the San Juan Islands. My community is harmed by the lead, as is the salmon community growing in eelgrass beds around this part of the Salish sea. The lead is harming the salmon that comprise an important part of the diets of Resident Orca Whales. I support a prohibition against fuels containing lead for small aircraft in this region.

Comment Number: EPA-HQ-OAR-2022_0389-0475-0001

Commenter Type: Private Citizen

Commenter: Jeanette Wheat

Organization:

Excerpt Text:

I live only 4 miles from one of the small airports where piston engines are the norm. I know the folks that fly in and out of this airport do so almost entirely for pleasure. I believe it is atrocious that they be allowed to spew leaded gas all over the air and ground they pass through and over, including my yard! I already have chronic health conditions. I don't need to add lead levels in my blood to that.

Comment Number: EPA-HQ-OAR-2022-0389-0149-0001

Commenter Type: Private Citizen

Commenter: A. McCoy

Organization:

Excerpt Text:

There is no safe level of lead, therefore lead emissions from aircraft engines cause air pollution that endangers public health and welfare. The EPA has delayed this endangerment finding since 2015. Appeals to the EPA to eliminate lead from av. gas go back as far as 2006. One can only assume that the general aviation community has been instrumental in this delay. Unleaded alternatives exist now, and more unleaded options will be available in the future. People on the ground have endured years and years of lead pollution from what is predominately a recreational activity. The lead emissions are a problem where there is concentration of piston engine planes - airports, flight training areas, flight paths.

Comment Number: EPA-HQ-OAR-2022_0389-0317-0001

Commenter Type: Private Citizen

Commenter: Doug Metzler

Organization:

Excerpt Text:

I am shocked that lead is still allowed in avgas. The great majority of the small piston planes using that are just private recreational planes. So these wealthy recreational fliers are just flying around polluting the air just for their own entertainment. This is disgusting.

Comment Number: EPA-HQ-OAR-2022_0389-0354-0001

Commenter Type: Private Citizen

Commenter: C Wulff

Organization:

Excerpt Text:

Maybe this doesn't seem to be a big deal, but how many small airports will need to remediate their soil when they close. And then the EPA is stuck with another clean up. So save lives and save future dollars.

Comment Number: EPA-HQ-OAR-2022_0389-0381-0001

Commenter Type: Private Citizen

Commenter: Kate Kenner

Organization:

Excerpt Text:

[FL TEXT REMOVED] -----At 6:00 AM I see a fari amount of planes in the sky. That is early in the morning-imagine how much lead is speed into the atmosphere at peak times. I did not know about this before but now that I do I see that it is imperative that something be done. The damage that is done every day is appalling and must be remedied.---- [FL TEXT REMOVED] Sincerely, Kate Kenner Brattleboro, VT 05301

Comment Number: EPA-HQ-OAR-2022_0389-0519-0001

Commenter Type: Private Citizen

Commenter: Joseph Wiesner

Organization:

Excerpt Text:

I support the EPA finding that lead air pollution puts public health at risk. It seems clear that aircraft using leaded fuel cause or contribute to that pollution. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0684-0001

Commenter Type: Professional Association

Commenter:

Organization: Pennsylvania Chapter of the American Academy of Pediatrics

Excerpt Text:

We applaud the EPA for their ongoing efforts to curb air pollution from different sources. We are in full support of the EPA's proposed action, finding that lead engine emissions contribute to air pollution and are a health hazard, as it is well known that lead has a significantly negative impact on children and disproportionately affects minority and historically marginalized communities (reference PMID: 30909658).

Comment Number: EPA-HQ-OAR-2022_0389-0741-0001

Commenter Type: Private Citizen

Commenter: Meghan Pierce

Organization:

Excerpt Text:

I strongly support EPA finding that lead air pollution is reasonably anticipated to endanger the public health and welfare under the Clean Air Act and that aircraft using leaded fuel cause or contribute to that pollution.

Comment Number: EPA-HQ-OAR-2022_0389-0741-0004

Commenter Type: Private Citizen

Commenter: Meghan Pierce

Organization:

Excerpt Text:

Lead-free alternatives are available, and EPA needs to address this serious gap in regulation. EPA must take action to protect communities in Wisconsin and nationwide from this harmful and unnecessary lead exposure.

Adopting the endangerment finding is a crucial first step in addressing the harms of this lead pollution. I urge EPA to make the finding to protect public and move all aviation beyond leaded fuels.

As someone living in Sauk County, right next to a small plane air craft area - I am worried my community, and my family's health.

Comment Number: EPA-HQ-OAR-2022-0389-0134-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Section I (A-J)

I am in agreement with the Proposal's considerations to this specific class of aircraft engines, as this finding will help future regulations be able to consider this specific engine as a contribution to pollution and threat to public health.

Comment Number: EPA-HQ-OAR-2022-0389-0143-0002

Commenter Type: Private Citizen

Commenter: Sandy Zelasko

Organization:

Excerpt Text:

Please find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-0158-0004

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

Overall, I believe that it is vital that the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare be passed for the health and safety of all Americans and people affected by American airfare, but especially for those living near airports who experience the large majority of emissions by airports.

Comment Number: EPA-HQ-OAR-2022-0389-0159-0003

Commenter Type: Private Citizen

Commenter: B. J. Wilson

Organization:

Excerpt Text:

Lead is a serious threat to public health and I applaud the EPA's decision to declare that lead emissions from aircraft contribute to air pollution and represent a threat to public health and welfare. I hope that this regulation will lead to improved emissions standards for covered aircraft so the public may be better protected from future lead pollution.

Comment Number: EPA-HQ-OAR-2022-0389-0196-0001

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

The EPA has invested time money and energy attempting to quantify the amount of pollution produced by leaded fuel burning small aircraft and the effects it has on children and on the environment. The data is impressive but the model used, fails to include rural communities where flight training schools are the dominant users of the airports. It is reasonably obvious that the run up, taxi, take off, and landing of small aircraft concentrate air and noise pollution at the airport and into the adjoining neighborhoods. I live in a rural area, 20 miles from several General Aviation airports. Since December of 2021, I have been inundated by airplane traffic, air pollution and noise pollution. According to what I have observed, an equal if not greater portion of the pollution produced by training aircraft is dumped 10 to 20 miles away from the airports into what some would label disadvantaged rural communities. A typical training flight may impact the urban/suburban airport at the beginning and at the end of the flight but the rest of the flight time is spent practicing descending/ascending circles over and over and over and over and over again in the rural community. (see attachment 1). Probably due to complaints from the people living close to the airports, the flight training pilots appear to have been instructed by someone? to fly to a rural area, burn as much leaded 100LL Av Gas as the program can afford, make as much noise as the worn out muffler is capable of, and perform as many maneuvers as required to relieve the boredom.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0002
Commenter Type: Advocacy Organization
Commenter: Gary Keller
Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

Last week the Center For Disease Control and Prevention held their national lead poisoning prevention week. General aviation aircraft participated that week by adding an additional 10 tons of lead into the air. The EPA tells us that piston-engine aircraft has, since 1930, emitted approximately 113,000 tons of lead into the air.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0003
Commenter Type: Advocacy Organization
Commenter: John Bottorf
Organization: Clean Earth 4 Kids

Excerpt Text:

You must take action to protect communities of concern you must stop the lead. We have bad air here in San Diego County. The American Lung Association gives us an F in ozone and, particulate matter, and to make it worse, aircraft dump over 5,000 pounds of lead on communities, children, schools, playgrounds, daycare, et cetera, every year.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0004
Commenter Type: State Government
Commenter:
Organization: California Air Resources Board (CARB)

Excerpt Text:

Piston-engine aircraft that use avgas are the largest single source of lead emissions in California. According to a study by the Santa Clara University Environmental Studies and Science Center for Environmental Health, general aviation (GA) accounts for about 83 percent of lead emitted in California [Footnote 2: Santa Clara University, Unleaded Aviation Fuel: Barriers to Adoption in California, updated March 2017, available at https://cagelfa.com/SCU%20Unleaded_Avgas_Capstone.pdf#:~:text=Unleaded%20Aviation%20Fuel%3A%20Barriers%20to%20Adoption%20in%20California,use%20it%2C%20with%20about%20%2C000%20added%20every%20year4.].

In 2015, EPA released a report on a study to monitor lead emissions at 17 different airports across the United States. According to that study, out of the six airports in California that were monitored, two exceeded the maximum three-month average concentration outlined in the NAAQS [Footnote 3: EPA, Airport Lead Monitoring, updated January 2015, available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100LJDW.PDF?Dockey=P100LJDW.PDF.>].

According to EPA's National Analysis of the Populations Residing Near or Attending School Near U.S. Airports from February 2020, California has the second -largest number of airport facilities among states in the U.S. with 965 airport facilities [Footnote 4: EPA, National Analysis of the Populations Residing Near or Attending School Near U.S. Airports, updated February 2020, available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100YG4A.PDF?Dockey=P100YG4A.PDF.>]. Many of these airports are in urban areas and serve aircraft that use leaded avgas, contributing to toxic airborne lead emissions. According to 2017 National Emissions Inventory (NEI) data [Footnote 5: EPA, 2017 NEI Data

- Search Results, available at

<https://enviro.epa.gov/enviro/nei.htm?pType=SECTOR&pReport=state&pState=&pState=06&pPollutant=&pPollutant=7439921&pSector=&pSector=56&pYear=2017&pCounty=&pTier=&pWho=NEI.> aircraft were responsible for emitting 50.47 tons of lead emissions per year in California.

Comment Number: EPA-HQ-OAR-2022-0389-0140-0003

Commenter Type: Private Citizen

Commenter: Bernita Fruhling

Organization:

Excerpt Text:

Piston-engine aircraft using leaded aviation gas are the largest remaining aggregate source of airborne lead pollution.

Comment Number: EPA-HQ-OAR-2022_0389-0272-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I think the EPA should update its current rules for lead in domestic paint and soil, as well as regulate aviation gasoline, the main source of lead emissions into the atmosphere, in order to safeguard children and communities from lead exposure. If the EPA truly cares about environmental justice and human health, it must immediately stop using leaded aviation fuel. Since lead is so harmful to human health, the most motor vehicles have been free of lead for the past 25 years. The EPA needs to act similarly for aviation gasoline, which is currently responsible for 70% of lead emissions into the atmosphere. Lead increases adult mortality and harms children permanently. In my opinion, it should cover all the regulations which are related to public health and require protection for public health in population.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0007

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

According to the docket, emissions of lead from covered aircraft have recently become the largest singular source of lead air pollution, and since 2008 have contributed more than 50% of the total lead air emissions in the United States.[Footnote 15: The lead inventories for 2008, 2011 and 2014 are provided in the U.S. EPA (2018b) Report on the Environment Exhibit 2. Anthropogenic lead emissions in the U.S.]

Comment Number: EPA-HQ-OAR-2022_0389-0324-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

When it comes to air travel, we often think of it as being highly regulated and offering top of the line

technology to continue to reduce emissions that put public health at risk. However, this may be only true for commercial air travel regarding the engines they use. Typical commercial jets use turbine engines that utilize Jet-A jet fuel, which is extremely refined kerosene fuel. These commercial jet engine emissions are highly regulated by the US Environmental Protection Agency (EPA) under the Clean Air Act (CAA) of 1970. Under the CAA, the EPA regulates the level of emissions of the exhaust from engines that include smoke (SN), hydrocarbons (HC), carbon monoxide (CO), oxides of nitrogen (NOx), carbon dioxide (CO2), and non-volatile particulate matter (nvPM). However, recent findings have found that covered aircraft (often the small recreational airplanes such as Cessnas) that use piston engines may be causing lead pollution in the air, at higher rates than expected. Under Executive Orders 14008 and 13563, it calls upon federal agencies to make achieving environmental justice part of their missions and allows federal agencies to consider equity, human dignity, fairness, and distributional considerations, where appropriate and permitted by law.

So, in response to these Executive Orders, the EPA is trying to crack down on preventable public lead exposures found in the fuel of piston engines that are used for covered aircraft. To do so, the EPA is proposing to define "air pollution" that is referred to in section 231(a)(2)A) of the CAA as lead/ lead air pollution along with the other elements already being regulated. This would allow the EPA to regulate the lead emissions like how they regulate other exhaust emission such as CO and NOx. This is an important step in reducing the amount of lead pollution because according to a study done by the EPA, it was found that the piston-engine emissions account for 70% of the total US lead inventory and cause nearly 500 tons of lead to be released into the air. This is also problematic because these smaller aircraft tend to fly at lower altitudes and take off and land over more densely populated areas.

Comment Number: EPA-HQ-OAR-2022_0389-0449-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

It is long overdue for EPA to take a holistic approach to protect children and communities from lead exposure, such as by updating its outdated standards for lead in household paint and soil, and by regulating the largest source of lead emissions into the air, aviation gasoline. If EPA takes seriously its commitment to public health and environmental justice, the agency must end the use of leaded aviation gasoline now. Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It is high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air. Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process. Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded aviation gasoline now. Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas. It is unconscionable that EPA has failed to regulate the largest remaining single source of lead emissions to the air. Regulating lead aircraft gasoline is a major step in fulfilling the Biden-Harris administration's commitments to protect children's health and promote environmental justice.

Comment Number: EPA-HQ-OAR-2022_0389-0530-0007

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

EPA's own estimates say 70% of airborne lead in the U.S. is from avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0533-0008

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

The toxicity of lead was recognized as early as 2000 BCE. Since the 1700's it has been common knowledge that handling lead causes sickness or worse. Lead paint was banned from residential use in 1978. Lead was banned from automobile gas in 1996. The US piston-engine aircraft fleet is growing by leaps and bounds. The vast majority of these planes use leaded fuel. EPA's own estimates say 70% of airborne lead in the U.S. is from avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0601-0001

Commenter Type: Private Citizen

Commenter: Frances Walker

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please stop leaded a gas. Leaded gas for cars was banned 25 years ago. Avgas is responding for 70% of lead released into atmosphere. It's past time to disallow it. Sincerely, Frances K Walker Sincerely, Frances Walker Gig Harbor, WA 98335

Comment Number: EPA-HQ-OAR-2022_0389-0648-0001

Commenter Type: Private Citizen

Commenter: Julian Park

Organization:

Excerpt Text:

The EPA must update its outmoded rules for lead in domestic paint and soil, as well as regulate aviation gasoline, the major source of lead emissions into the atmosphere, in order to safeguard children and communities from lead exposure. If the EPA truly cares about environmental justice and human health, it must immediately stop using leaded aviation fuel. Considering the fact that lead is so harmful to human health, most motor vehicles have been free of lead for the past 25 years. The EPA needs to act similarly for aviation gasoline, which is currently responsible for 70% of lead emissions into the atmosphere. Lead increases adult mortality and harms children permanently. The biggest source of lead in the air in the nation must be controlled by the EPA. Every day of delay increases the number of individuals breathing lead, including thousands of children. We implore the FAA to assist local governments, counties, and the EPA in this crucial procedure. Despite the fact that the government for decades disregarded the largest single source of lead airborne emissions in the nation, lead is well known to be harmful, especially to

children. They must immediately stop using leaded aviation fuel. Lead exposure harms children's development irreparably and contributes to the over 500,000 adult deaths per year from cardiovascular disease. The Environmental Protection Agency must swiftly complete its risk assessment and collaborate with the Federal Aviation Administration to phase out leaded gas. The EPA's failure to control the principal source of lead emissions into the atmosphere is abhorrent. In order to uphold the Biden-Harris administration's promises to safeguard children's health and advance environmental justice, regulating lead airplane gasoline is a critical step.

Comment Number: EPA-HQ-OAR-2022_0389-0699-0001

Commenter Type: Private Citizen

Commenter: Tony Romero

Organization:

Excerpt Text:

I urge the EPA to finalize its finding that lead emissions from covered aircraft engines using lead fuel endanger human health. In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the annual emissions of lead to air in that year. Protecting children's health from environmental risks is fundamental to the EPA's mission.

Comment Number: EPA-HQ-OAR-2022_0389-0706-0001

Commenter Type: Private Citizen

Commenter: Estefania Bautista

Organization:

Excerpt Text:

I urge the EPA to protect the most vulnerable communities and regulate leaded airplane fuel now. It is a health hazard to have airplanes fly above homes with lead raining on them. Over 5 million people live near small airports where covered aircraft engines use leaded fuel operate. In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the annual emissions of lead to air in that year. As someone who works in East San Jose (CA), these types of studies are ones that not only concern me due to being 1.5 miles away from the Reid Hillview Airport, but make me wonder what kind of future we will have if nothing is done. Locally, a comprehensive study of 10 years of data confirmed that children living near Reid Hillview Airport were at elevated risk for harmful lead exposure. They are either experiencing symptoms now or they may develop as they age. This is frightening! I urge the EPA to finalize its findings and take action to protect the most vulnerable and who have been marginalized due to their immigration status, their income level, and their racial background.

Comment Number: EPA-HQ-OAR-2022_0389-0744-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Say NO to East Hampton Airport, Inc.

Excerpt Text:

I am writing to support an immediate ban on the sale and use of leaded fuel in all piston aircraft. Leaded fuel use in aviation has been an on-going problem with low-altitude flights over my area and many other communities for decades. The toxicity of lead is well known, has been since the removal of lead from auto gasoline beginning in the 1970's. It is nothing but egregious abuse that the law permits continued use

of leaded fuel in the USA -- to the detriment of all life and to the future of the very planet we call home. We know that no level of lead is safe. We know lead accumulates and persists in the air. We know that 70% of lead in the air today is caused by emissions from piston aircraft fueled by avgas. The many health issues caused by lead have been well researched and documented. The FAA has dragged its feet for far too long on this issue, and every day more lead is being spewed into the air by non-essential flights, many of those flights simply joyrides, going around in circles, over the same area. Pilots and aircraft owners are well aware of the toxic emissions they are widely dispersing over our communities and should be held accountable. Many small aircraft can use already available unleaded fuel, such as that sold by SWIFT Fuels--right now. They choose not to. Other aircraft types can have engines retrofitted to use that same unleaded fuel. They choose not to. All life is impacted. Daily. No more time should be devoted to studies. Ban the use and sale of leaded fuel until unleaded fuel is introduced.

Comment Number: EPA-HQ-OAR-2022_0389-0756-0003

Commenter Type: Private Citizen

Commenter: Cynthia Allison

Organization:

Excerpt Text:

Back in the "good old days", we had Christmas trees that were decorated with lead tinsel and fiberglass angel hair. Often the decorations included artificial snow that was made from asbestos. Back in the "good old days", chemistry sets came with a spinthariscopes, which was a radioactive device that you held up to your eye to watch photons being released as alpha particles, We put mercurochrome on cuts, and thermometers contained mercury. There was radium on watches and clocks so they would glow in the dark. Shoe stores had a fluoroscope so the shoe fitter could see the bones in your feet. There was lead in paint, and leaded gasoline in cars. And guess what? All of those things are no longer in use, because they have been deemed unsafe. There is still one big exception, and that is leaded aviation fuel.

The hundreds of small planes that fly low around our neighborhoods every day, still use leaded fuel. EPA's own estimates are that 70% of airborne lead in the US is from leaded avgas. The aircraft engine exhausts most of this lead as lead dust, which lands on the ground and seeps into soils, sticks wherever it lands, and is breathed in.

Comment Number: EPA-HQ-OAR-2022-0389-0153-0003

Commenter Type: Private Citizen

Commenter: Kimberly Turner

Organization:

Excerpt Text:

Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It's high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air.

Comment Number: EPA-HQ-OAR-2022-0389-0158-0002

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

According to Table 1- Piston-Engine Emissions of Lead to Air, as of 2017, piston-engines emissions account for 70% of the United State’s lead emissions, contributing 470 tons each year. This number is steadily rising, despite the growing need for emissions mitigation in the ongoing international climate crisis. As recognized by the EPA, 47% of these lead emissions are emitted during the landing and takeoff cycles, meaning that, while a majority of pollution is still released throughout the flight, these emissions are more dispersed and therefore have more marginal effects on those living in flight paths. However, those living near airports experience a constant wealth of highly concentrated lead and air-pollution which can have drastic effects on their lives. As a person living near not one, but two highly trafficked airports, I am deeply concerned with the effects that lead and air-pollution emitted from these aircrafts will have on my health and the health of my community, especially those in my community who face marginalization or who are in early stages of development. The EPA also recognizes that, not only are these pollutants airbourne, but they can have impacts on soil, food, and aquatic environments which further degrades our environment, impacts our diets, and damages our health.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0005

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

As the rule proposal explains, the consequences of unregulated lead pollution in the atmosphere are critical. However, there may be some people asking “why do we need to then regulate aircraft engines? Why can’t we just regulate other lead-polluting sources?” While this is an understandable argument, the importance of addressing aircraft engines cannot be understated. As the EPA points out, in 2017, aircraft piston engines constituted 70% of the total U.S. lead air emissions [Footnote 9: Ibid. pg. 62761]. This also comes after the fact that lead emissions have been decreasing since 2011 (and before), while piston-engine emissions have remained largely the same since 2011 [Footnote 10: Ibid.]. All this is to say that it is time to finally bring aircraft lead emissions to the same place that the total U.S. lead emissions are at. It is time to start regulating aircraft engines that operate on leaded fuels.

Comment Number: EPA-HQ-OAR-2022-0389-0188-0001

Commenter Type: Private Citizen

Commenter: Blaine Ackley

Organization:

Excerpt Text:

-Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It’s high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air.

Comment Number: EPA-HQ-OAR-2022-0389-0196-0002

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

Each gallon of 100LL AV Gas contains .07478 ounces of lead. For every 214 gallons of 100LL AV Gas burned, 1 pound of lead is dumped into the environment.

Comment Number: EPA-HQ-OAR-2022-0389-0199-0002

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

After the mid-1980s phasedown, the highest exposure to TEL shifted from traffic-congested urban centers to communities surrounding General Aviation airports, rural aerial crop spraying areas, and communities where small planes pull advertisements over popular public events.

Leaded aviation gasoline is used in nearly 170,000 piston-engine aircraft across 20,000 airports. It is the last major unregulated source of airborne lead emissions. According to EPA, 500 tons or about 70% of the lead is invisibly released into the air in the US. Banning leaded avgas is a primary prevention action to decrease lead exposure by the people of the US.

Comment Number: EPA-HQ-OAR-2022-0389-0213-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Northeast States for Coordinated Air Use Management (NESCAUM)

Excerpt Text:

Table 1 of the Proposed Finding reports that lead emissions from piston-engine aircraft accounted for 70% of total U.S. lead air emissions in 2017; that percentage increased from 59% in 2008 due to decreased emissions from other source categories [87 Fed. Reg. 62761]. The Proposed Finding further cites modeling results that show the impacts of those emissions extending 500-1000 meters from airport runways [87 Fed. Reg. 62761].

number likely do so on-site.

Comment Number: EPA-HQ-OAR-2022-0389-0231-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

From the FAA [Footnote 9: http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14754], leaded aviation fuel is used in almost 170,000 piston-engine planes & helicopters (general aviation) in over 20,000 airports in the US. Less than 1/4% of Americans are pilots for these aircraft. These planes and helicopters cause 70% of the lead pollution [Footnote 10: <https://earthjustice.org/news/press/2022/epa-proposes-endangerment-finding-of-leaded-aviation-gasoline>] in our air!

Comment Number: EPA-HQ-OAR-2022-0389-0238-0014

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The percentage of the U.S. lead air pollution inventory coming from piston- engine aircraft emissions has grown steadily, increasing from 59% in 2008 to a staggering 70% of all lead air emissions in the nation in 2017, when piston-engine aircraft emitted approximately 470 tons of lead.[Footnote 54: Endangerment Finding, 87 Fed. Reg. at 62761.]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0002

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

In its proposed finding, the EPA provides overwhelming evidence that leaded avgas meets the legal requirements for regulation under section 231 of the Clean Air Act: (1) lead air pollution has been known for decades to endanger the public health and welfare, and (2) emissions from leaded avgas, which account for 70% of airborne lead, incontrovertibly cause or contribute to this pollution. These burdens are not evenly distributed.

Comment Number: EPA-HQ-OAR-2022-0389-0241-0003

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles, CA, Board of Supervisors

Excerpt Text:

Lead was phased out of automotive fuels in the 1970s but is still used in aviation gasoline for piston-engine aircraft. These aircraft constitute most of the country's General Aviation fleet. The burning of leaded aviation gasoline accounts for an estimated 70% of airborne lead emissions in the U.S. There are an estimated 170,000 piston-engine aircraft nationwide, operating out of an estimated 13,117 airports.

Comment Number: EPA-HQ-OAR-2022-0389-0247-0003

Commenter Type: Local Government

Commenter:

Organization: Winthrop Board of Health

Excerpt Text:

We understand that the majority of aircraft that operate on leaded aviation gasoline are piston-engine aircraft. These are typically small aircraft that carry 2-10 passengers. Jet aircraft used for commercial transport do not operate on a fuel containing lead.

However, as you document, piston-engine aircraft are the largest single source of lead emissions to the air in the U.S., contributing 70% of the lead entering the air annually. The emissions of lead from aircraft operating on leaded fuel cause elevated levels of lead in air near airports such as in our community.

Comment Number: EPA-HQ-OAR-2022-0389-0256-0002

Commenter Type: Private Citizen

Commenter: Kathryn Sharpe

Organization:

Excerpt Text:

I worked for many years in a painting studio across the street from Kurtzer Flying Service on Lake Union in Seattle, WA, and realize now that I was unknowingly exposed to lead from the piston-driven seaplanes.

I am shocked and saddened to learn that there is still lead in aviation gasoline (avgas), and that it is the biggest source of lead emissions in our atmosphere (it accounts for 70%). In addition, our standards for lead, which is retained in the soil, are sadly behind the times and need an update.

Comment Number: EPA-HQ-OAR-2022-0389-0261-0001

Commenter Type: Private Citizen

Commenter: Sheryl Gold

Organization:

Excerpt Text:

I am writing to support the ban on the sale and use of leaded fuel in all piston aircraft.

Leaded fuel use in aircraft has been an on-going and increasing problem with low altitude flights over my home, my community (the Town of East Hampton, NY) and many cities, towns and villages on Long Island. The toxicity of lead is well known, especially as it affects youngsters. The many health issues caused by lead have been well researched and documented. NO LEVEL OF LEAD IS SAFE. And 70% of lead in the air today is caused by emissions from piston aircraft fueled by avgas.

While lead from auto gasoline was removed, beginning in the 1970's, absolutely nothing has been done in the aviation industry. This is unacceptable and irresponsible.

The FAA has failed to address this hazardous condition. And as the years pass, more lead is being spewed into the air by non-essential flights. Aircraft owners and pilots are aware of the toxic emissions they are dispersing over our communities, homes, schools, playgrounds, parks and nature preserves; and should be held accountable. Many small aircraft can use unleaded fuel-- available now-- but they refuse to. Some refuse to retrofit their engines to enable them to use unleaded fuel.

As one who is personally impacted by non stop air traffic spewing leaded fuel over my house and deck, I strongly urge the ban of unleaded fuel NOW. Please stop the harm being perpetrated on our citizens and planet.

Comment Number: EPA-HQ-OAR-2022-0389-0263-0003

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles CA, Board of Supervisors

Excerpt Text:

Lead was phased out of automotive fuels in the 1970s but is still used in aviation gasoline for piston-engine aircraft. These aircraft constitute most of the country's General Aviation fleet. The burning of leaded aviation gasoline accounts for an estimated 70% of airborne lead emissions in the U.S. There are an estimated 170,000 piston-engine aircraft nationwide, operating out of an estimated 13,117 airports.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0013

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

B. Lead Emissions from Aircraft Contribute to Harmful Lead Air Pollution.

EPA proposes to find that lead emissions from “covered aircraft”—defined to mean all aircraft and ultralight vehicles equipped with “any aircraft engine that is capable of using leaded aviation gasoline,” [Footnote 83: 87 Fed. Reg. at 62,754.] the vast majority of which are piston-engine powered [Footnote 84: Id. at 62,778 (“The vast majority of covered aircraft are piston-engine powered.”).] — cause or contribute to air pollution that is reasonably anticipated to harm public health and welfare. This conclusion is also supported by ample evidence, and it must be finalized.

Emissions from piston-engine aircraft contribute roughly 70% of lead released domestically into the atmosphere. [Footnote 85: Transp. Rsch. Bd., Nat’l Acads. of Scis., Eng’g, & Med. et al., Options for Reducing Lead Emissions from Piston-Engine Aircraft 46 (2021), <https://www.nap.edu/read/26050/chapter/5>.] In prior endangerment findings, EPA has found that air pollution from a specific source “contribute[s]” to air pollution that may endanger public health or welfare at much lower relative contribution levels—at levels less than 3% of the total inventory of emissions. [Footnote 86: See 75 Fed. Reg. at 22,445 (“EPA has found that air pollutant emissions that amount to 1.2 percent of the total inventory met the statutory test for contribution, triggering EPA’s regulatory authority.” (citing Bluewater Network, 370 F.3d at 15)); 81 Fed. Reg. at 54,461 (finding that “the collective GHG emissions from the classes of engines used in U.S. covered aircraft clearly contribute to endangering GHG pollution, whether the comparison is . . . to domestic GHG inventories . . . representing 2.8 percent of total U.S. emissions [or] to global GHG inventories. . . [representing] 0.4 percent of all global GHG emissions”).] Where, as here, emissions from aircraft operating on leaded avgas make up the vast majority of domestic lead air pollution, it would be arbitrary and capricious for EPA not to finalize its “cause or contribute” finding.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0001

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

Good afternoon, I am Sylvia Gallegos, the Deputy County Executive representing the County of Santa Clara, a government agency that serves nearly two million residents from our county seat of San Jose, California. I am here before you with Dr. Bruce Lanphear who is one of the leading experts on the health effects of environmental toxins and serves as a consultant to the county, and Sydney Speizman, who is a certified student attorney at the Stanford University Environmental Law Clinic speaking today as our outside counsel. First, many thanks to the EPA for conducting this public hearing. The proposed finding will affect millions of children and families who live proximate to over 13,000 general aviation airports across the nation. Our comments today will supplement our written submission. As the EPA knows leaded AVGAS in general aviation is the single greatest source of lead emissions. In 2017 the air emissions inventory you reported that piston-engine aircraft accounted for 460 80 tons of emissions which was about 70 percent of lead emissions in the United States.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0004

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

Second, lead emissions from combustion of leaded AVGAS more than contribute to this damaging lead air pollution. Leaded AVGAS combusted by piston-engine aircraft is the source of a staggering 70 percent of lead air pollution nationwide. Studies clearly link these emissions to profound health and welfare harms.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0001

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

My name is James Lawson. I represent the Southern Maryland Fair Skies Coalition. I wish to thank the EPA for this hearing proposed finding that lead emission from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. The Maryland Airport is a small airport in George County, Maryland. The Maryland Airport is in a predominantly black area of George County, Maryland. The airport is located less than a mile from McDonough, Henderson Mills School and JC Park Elementary School, both of which have predominantly black student populations. The airport has approximately 22,000 airplanes taking off and landing in 2020. The airport primarily serves piston-engine airplanes, the vast majority of which are fueled by aviation gas which contain lead. Small aircraft across the United States account for about 70 percent of lead released into the atmosphere.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0004

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

Leaded gasoline has been banned for most use for decades, much of the nation's best but aging fleet of small aircraft run on fuel containing added lead which increases octane and prevents problems with piston powered engines. The EPA said piston powered aircraft produce 70 percent of the total lead emitted into the air nationwide.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0007

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

EPA FAA forecasts showing that the consumption of leaded airplane fuel is expected to total 125 million gallons in 2026 and many places communities of color are most impacted.

Comment Number: EPA-HQ-OAR-2022_0389-0321-0001

Commenter Type: Private Citizen

Commenter: John Holstein

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0355-0001

Commenter Type: Private Citizen

Commenter: Mike Ellison

Organization:

Excerpt Text:

I am writing to you from Vancouver, WA where we have a local airstrip located adjacent to our downtown area and a wonderful new waterfront development. These are the public squares for our city with Farmer's markets, festivals, and other civic gatherings. as an environmental chemist, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-024-0001

Commenter Type: Private Citizen

Commenter: Brooke B.

Organization:

Excerpt Text:

I just found out about this hearing, short notice and I was very glad to see the EPA is addressing this issue once again. So thank you, EPA, and thank you for holding the public comments but this is as others speakers have noted way overdue. A little bit about me, I am 46 years old and I have three children ages eleven, eight, and four and I moved to Clearwater, Florida about a year ago, and realized shortly after moving here, I didn't know this before I moved here, that I was in a mile of Clearwater Air Park and I realized this because there were small planes flying over my house on an hourly basis. And I got curious about the planes and the airport and looked into things and discovered using the airnav.com website that Clearwater Air Park is a high traffic general aviation airport owned by the City of Clearwater about, according to that airnav.com website more than 50,000 flights take place in the Clearwater Air Park every year and that that equates to about .2 tons of lead. Now, it seems that the minimum threshold for air quality monitoring for lead is one ton so there is no air quality monitoring of lead going on in this area but in addition to the fact that I live with my three children within a mile of the Clearwater Air Park, there are at least four schools, multiple recreational parks and Clearwater, Florida for those who might not be aware, is in Pinellas County which is the most densely populated county in the State of Florida. It's tons of people and tons of children. Needless to say, I was shocked to discover that the fact that all of this lead was being pumped into the air around my home. I mistakenly naively would have assumed that the lead would have banned from gas in planes as well as with cars back when I was one years old like back in the '70s. It's been 25 years that car lead has been banned and I just couldn't believe that aviation gas could have lead in it. So, I don't understand how that loophole didn't get closed before now, but at any rate, I can't afford to move, I don't think I even meet the criteria for middle class according to the sort of statistical measure of middle class, but I have attempted to raise consciousness about this in my community, I went to the Clearwater Air Park and said hey, the FAA has approved a lead-free aviation gas, can you substitute that for all of the aviation gas you sell, he said no, that's a big source of income for our airport and that's not happening.

I talked to the Mayor of Clearwater, City of Clearwater owns the airport, similar response, nobody cares, they are not going to do anything unless somebody makes them, unless there is a regulation coming down from the EPA or, I don't know the Biden/Harris administration, whoever you know, gets to say that this needs to be banned. Whoever told the motor vehicle industry that lead needed to be taken out needs to tell the aviation industry. So, I just wanted to share a little bit of the back story and I guess the main question I have as I sort of live this life with planes overhead dumping lead on my children, on my gardens, the question I have is why are private citizens expected to absorb the cost of industrial pollution, right, like why -- why are we suffering because companies made money off of and continue to make money off of selling fuel with lead in it. We didn't go dig up the lead from the middle of the earth, we didn't put it in aviation fuel, we didn't market it as whatever no NOx or the aviation industry or AVGAS is selling this fuel in marketing strategies, so why are we expected to absorb the cost in form of neurotoxins in our body, in our children, in our bodies, in our vegetables. It just makes no sense to me. It's a most vulnerable population that the EPA, the Federal Government are expecting our children, the most vulnerable in our society to absorb and it makes no sense to me and it's complete unethical and morally bankrupt. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-0259-0004

Commenter Type: Private Citizen

Commenter: Viney and Nelson

Organization:

Excerpt Text:

Your action will ultimately safeguard the health of our children and community by eliminating exposure to lead, and we cannot begin this work soon enough.

Aircraft that operate on leaded aviation fuel are the largest remaining source of lead emissions into the air. Lead from aircraft that use leaded aviation gasoline pollutes our air, our water, our lands and tragically, our bodies as well.

Airports located in San Diego County are the source of multiple tons of lead into our communities. For the year of 2017 alone, the National Emissions Inventory (NEI) reported 719 pounds of lead emissions from Palomar Airport.

Palomar Airport is the second top lead-polluter amongst the eight county-owned general aviation airports per Oregon Aviation Watch, and amongst the 50 most lead-polluting airports in the nation according to Earth Justice.

We were elated to hear the news that on January, 2022 the EPA released the following news: "EPA to Evaluate Whether Lead Emissions from Piston-Engine Aircraft Endanger Human Health and Welfare." We realize that it is past time to ban leaded aviation gas, and that the EPA acted prudently when it banned leaded gasoline for vehicles in or about 1996.

Please demonstrate the leadership and initiative required to protect our children and communities from the toxic health impacts of lead now. Please do not delay taking the action needed to stop the poisoning of our children from leaded aviation fuel.

Please consider reading the linked article which says that "County officials are working to shut down Reid-Hillview Airport in East San Jose, citing lead exposure for surrounding residents.", if you have not already done so, link: <https://sanjosespotlight.com/reid-hillview-airport-san-jose-lead-exposure-poisoning/>.

Comment Number: EPA-HQ-OAR-2022_0389-0737-0003

Commenter Type: Private Citizen

Commenter: Teodora Reyes

Organization:

Excerpt Text:

Recreational airplane emissions like those used in the planes at Whiteman Airport are the number one source of airborne lead emissions, contributing to health issues such as kidney damage, brain damage, pregnancy concerns, and premature death. According to the USEPA, there is NO acceptable or safe amount of lead for humans at any age. The use of Lead based in aviation practice is one of the many reasons, I also support the closure of Whiteman Airport.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0014

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Lead emissions from aircraft that use leaded avgas have direct and harmful effects on the communities surrounding the airports where these aircraft operate. Lead air pollution is higher in the areas surrounding general aviation airports where aircraft using leaded avgas operate; as EPA explains in its Proposed Endangerment Finding, “[a]ir quality monitoring and modeling studies for lead at and near airports have identified elevated concentrations of lead in air from piston-engine aircraft exhaust at, and downwind of, airports where these aircraft are active.” [Footnote 87: 87 Fed. Reg. at 62,762.] Indeed, a report submitted to the docket by the Town of Middleton, Wisconsin demonstrates this. Consultants hired by the Town measured ambient lead concentrations at locations surrounding a municipal airport where leaded avgas is used and compared these measurements to modeled lead concentrations based on certain assumptions regarding lead content of avgas, flight patterns, and airport activity. They found that ambient lead levels were elevated near the municipal airport— as was expected by the modeling study—and that the sampling and modeling data together supported the conclusion that the “local aircraft operations at the . . . airport are the dominant source of ambient lead in the area.” [Footnote 88: Trinity Consultants, Measurement of Ambient Lead Concentrations Around the Middleton Wisconsin Municipal Airport – Morey Field (C29), at 2-4 (Sept. 15, 2022), <https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0389-0178> (click “Download” for “Attachment 2”).]

Lead air pollution emitted by airplanes is particularly harmful compared to other sources of lead air pollution. Recent research—cited by EPA in its Proposed Endangerment Finding— shows that the piston-engine aircraft exhaust has lead-containing particles that are smaller in size than exhaust particles from automobiles burning leaded fuel. [Footnote 89: See Jack D. Griffith, Electron Microscopic Characterization of Exhaust Particles Containing Lead Dibromide Beads Expelled from Aircraft Burning Leaded Gasoline, 11 Atmospheric Pollution Rsch. 1481 (2020), <https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0018>.]

Comment Number: EPA-HQ-OAR-2022-0389-0238-0022

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The EPA should finalize this endangerment finding early in 2023

This status quo of public health crises and environmental injustices posed by leaded avgas will persist and worsen without federal action. The EPA acknowledges that, without controls, lead emissions from piston-engine aircraft are likely to continue to be an important source of lead air pollution.[Footnote 112: Endangerment Finding, 87 Fed. Reg. at 62780.] Indeed, the EPA’s projections of piston-engine aircraft activities out to 2045 predict that the number of airports with lead emissions ≥ 0.1 tons will increase from 638 to 656.[Footnote 113: Id. at 62760.] Air lead concentrations may approach or potentially exceed the current National Ambient Air Quality Standards for lead (“lead NAAQS”) at these levels.[Footnote 114: Id. at 62764.] While air lead concentrations exceeding the NAAQS are a particular concern, airport lead emissions are detrimental regardless of whether they cause exceedances of the lead NAAQS. The lead NAAQS have been criticized for being insufficiently protective of human health and may miss a significant channel of airborne lead exposure from the 20% of leaded avgas exhaust emitted in the readily inhalable vapor phase. [Footnote 115: See Lanphear Decl.14.] Moreover, lead pollution is unsafe and can cause significant and irreversible damage to human health at any level of exposure, with incremental harms to cognition most severe at lower exposure levels.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0009

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

Figure 1: Demonstrated proximity from Cloquet-Carlton County Airport to 2 local schools (upper left) within the boundaries of the reservation; the Fond du Lac Ojibwe School and Fond du Lac Headstart. Also shown are multiple residences and natural areas, including gardens, forests, ponds, streams, and lakes. The orange line on the right hand portion of this map constitutes the nearby portion of the eastern reservation boundary.(Image Source: Google Earth)

As poignantly stated by the EPA in this docket and the 2013 Lead ISA, “there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure.” [Footnote 1: EPA (2013) ISA for Lead. Executive Summary “Effects of Pb Exposure in Children.” pp. lxxxvii-lxxxviii. EPA/600/R–10/075F, 2013] Further referenced in this docket, “Residential proximity to airports implies that there is an increased potential for exposure to lead from covered aircraft engine emissions.” [Footnote 2: EPA Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. Section 4.2.1] As a reservation with a municipal airport (operating since 1942) within its exterior boundaries, and with two schools, tribal housing, and local residences in close proximity to the airport (some less than 1 kilometer), leaded aircraft fuel is of concern for our community (Figure 1).

As evidenced through several mentioned studies, there are risks of adverse human health effects with increased blood lead levels within adult populations: cardiovascular issues like increased blood pressure, hypertension, coronary heart disease, or cardiovascular mortality, as well as cognitive effects such as anxiety, depression, and impacts on the immune system.[Footnote 3: Klemick et al., 2022. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. International Journal of Environmental Research and Public Health. 19(10):5941.][Footnote 4: EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013][Footnote 5: EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68. EPA, Washington, DC, EPA/600/R– 10/075F, 2013.] Native American populations already suffer from disproportionately high rates of these chronic issues, “including double the rate of heart disease compared to other populations, higher rates of obesity, the highest rates of high blood pressure, cholesterol, and Type II diabetes of any racial group in the country.” [Footnote 6:] Children can also be

especially vulnerable to the effects of lead exposure. Cognitive effects in children like depression, conduct disorders, anxiety, impulsivity, hyperactivity, and other developmental effects can negatively impact academic performance.[Footnote 7:] While children are still developing, their organ systems may be left especially vulnerable to lead, and some neurocognitive effects of lead on concentration, intellect, and academic achievement may be transient, while other effects may persist into adulthood. .[Footnote 4: EPA (2013) ISA for Lead. Executive Summary. ‘‘Effects of Pb Exposure in Adults.’’ p. lxxxviii. EPA/600/R– 10/075F, 2013][Footnote 8:] Working to reduce lead emissions in the air from covered aircraft would likely help to lower lead exposure in communities around airports and thus help improve the overall health, academic achievement, and quality of life of adults and children living in these areas around the country.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

We write as the [Italics: Close Reid-Hillview Airport Now! Coalition] members and supporters. Our coalition is composed of not-for-profit organizations and neighbors of the Cassell community in San Jose advocating for the closure of Reid Hillview airport. We write this letter to urge you to finalize the endangerment finding and enact a policy to regulate leaded aviation fuel, along with providing support to communities who have long suffered from the dangers of exposure to airborne lead pollution.

Our support for the endangerment finding is rooted in our experiences as residents in the Cassell neighborhood and community advocates who have been working to close Reid Hillview airport for years. Reid-Hillview Airport has contributed to toxic airborne lead pollution in East San Jose for decades and is an inappropriate use in the dense urban environment. The surrounding neighborhoods have endured constant noise, the risk of plane crashes, and dangerous air pollution for decades.

Comment Number: EPA-HQ-OAR-2022-0389-0255-0001

Commenter Type: Private Citizen

Commenter: Kim Gustafson

Organization:

Excerpt Text:

I live in Louisville, Colorado near Rocky Mountain Municipal Airport. Air traffic from RMMA and DIA is unrelenting from before dawn until well past dark. The noise is constant — definitely disturbing residents and the wildlife that live in nearby open spaces. There’s not even a minute of quiet throughout the day.

I’m especially concerned about lead fuel emissions and have repeatedly requested data on the prevalence of emissions from the constant aircraft flying overhead. There are numerous schools and children in this area impacted by these emissions as well.

No noise and health impacts have ever been analyzed to my knowledge. Quality of life has certainly deteriorated since RMMA increased flight training. RMMA pretends to be a good neighbor but it is profit-driven and unresponsive to citizens’ complaints and concerns.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-003-0002

Commenter Type: Private Citizen

Commenter: Migdalia Rodriguez-Cubides

Organization:

Excerpt Text:

We are very concerned as a community not only for those who live there but also for those that work there. It is not possible to have commercial aviation activities in this area. This is related to air pollution since they use leaded fuel, and their commercial activity is prioritized over the human rights to protect the health of all of us who work there. There are several sources of contamination in this sector that result in mistrust among all who work here. One of the negative impacts is the air pollution from various sources and now we add airplane emissions to the environment to be able to carry out their economic activities and disregard the combination of these substances that are mixed there and potentially endanger everyone's health, including the health of children who are very sensitive in connection with their growth and development.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0002

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

People want to go about their day not worrying about the toxic chemicals being dropped over their homes. People want to know that the agencies that are meant to protect public and environmental health are doing just that and it's in solidarity with these families that live in close proximity to the general aviation airports and that are breathing the lead that's being dropped into the air that we ask the EPA to really expediate the phase out of leaded AVGAS. CEH took action in 2008 which required fixed based operators or FBOs at 27 California airports to post and mail out warnings about their lead exposure because people have had and have the right to know about this ongoing lead hazard. And residents right to know is really just the bare minimum. NGO allies and the countless community lead groups that have formed to confront this problem have been petitioning and fighting for a systemic solution for well over a decade urging the EPA to reach this point.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-023-0002

Commenter Type: Private Citizen

Commenter: David Bryce

Organization:

Excerpt Text:

and there are more than 500 airports in Wisconsin where piston-engine aircraft use leaded aviation gas. The Town of Middleton shares a geographic boundary with a recreational general aviation airport, C29 owned by the City of Middleton that was mentioned before. This piston engine aircraft operating out of this airport uses leaded aviation gas and repeatedly fly below the mixing height over this densely populated area comprised of many residents, schools, play grounds and parks as also mentioned before.

Comment Number: EPA-HQ-OAR-2022_0389-0412-0001

Commenter Type: Private Citizen

Commenter: Irene Svete

Organization:

Excerpt Text:

[FL TEXT REMOVED] My home (like much of Seattle) is located under the flight approach for SeaTac and King County airports, as well as close to Interstate 5. [FL TEXT REMOVED] And lead does not go away. We are not permitted to grow food anywhere on the property around our cooperative due to high lead content in our soils - a legacy from the leaded car fuels that were banned 25 years ago. [FL TEXT REMOVED] Sincerely, Irene Svete Seattle, WA 98102

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-034-0002

Commenter Type: Advocacy Organization

Commenter: Robert Germann

Organization: Citizens Against Gillespie's Expansion Low Flying Aircraft

Excerpt Text:

I also would like to say that most of the lead that is spread in our inner cities is from commercial intent flight schools which has come about in the last ten years. The other thing and why it's so important that they are not allowed to do their touch and go is to cool their engines during flight training, they run full rich, in other words, they are cooling their engines with leaded AVGAS. And by running full rich, they are giving their engines more fuel than it can burn. Now, the FAA, the manufacturers recommend this and so that's what the flight training schools do and if they are going to do that, then they need to do it where they won't harm our families, our neighborhoods and everything along that thing.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0003

Commenter Type: Advocacy Organization

Commenter: Gary Keller

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

You know what it really doesn't matter if a person breathes in, swallows or absorbs the lead particles, the health effects are the same, however, the body absorbs higher levels of lead when it is breathed in. So why are we here today? At the third try of an endangerment finding since 2006, because now we have the Reid-Hillview study, the very one that the GA industry never wanted to take place. Because similar to tactics by big tobacco and lead paint, when the polluting general aviation industry didn't like the Dr. Lynn Miranda in 2011 scientific study that first proved that children living near general aviation airports had elevated blood lead levels, they just went to a more favorable study. The Office of Transportation and Air Quality which is part of the EPA no less provided such a study published in 2013 which took lead air samples at 17 airports across the U.S. Unlike the Miranda study a number of these had plenty of lead emissions. It concluded that all 17 of these airports were safe as they eventually they all passed the national ambient air quality standard test. GA airports can now claim that there is lead at these airports but it is in such a very small safe quantity it doesn't matter. In essence the report justified their continued poisoning of children for the next eight years. That same report is looking a little weak right now, because Reid-Hillview was one of the 17 airports where air sampling took place. The parents of the children living around Reid-Hillview some of whom have spoken today now know that they are definitely not safe from those lead emissions. Other airports on that 17-airport list such as Centennial which every year is in the top two in the lead emitting airports in the world are now highly suspect. The Reid-Hillview study has

now shown the glaring weakness of the national ambient air quality standard. The endangerment finding should be obvious. The problem is crystal clear but is also becoming crystal clear is the delay in stalling tactics that the aviation industry will employ in the replacing of the leaded fuel with unleaded. While they would like to stop the lead when the world runs out of fossil fuel others have worked more quickly.

Comment Number: EPA-HQ-OAR-2022_0389-0285-0001

Commenter Type: Private Citizen

Commenter: Jim Long

Organization:

Excerpt Text:

I have personal experience observing piston-driven aircraft habitually circulating above an elementary school and middle school in Bryans Road, MD, only 19 miles from EPA headquarters. You can see 12 second video clip here: <https://youtube.com/shorts/ZUQ4VGEj0Jk> Therefore, I write to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Jim Long Ithaca, NY 14850

Comment Number: EPA-HQ-OAR-2022_0389-0325-0001

Commenter Type: Private Citizen

Commenter: Lorna Emdy

Organization:

Excerpt Text:

I live in Hailey, Idaho where the toxic fumes from the airport located in this town poison the air for all citizens. Commercial and small planes fly right over the south valley neighborhoods to land and take off. The fumes from the jet fuel can be smelled a long distance from the airport, and an elementary school is across the street from the airport. Heavy cold air in the winter keeps the noxious fumes close to the ground. so everyone can smell and taste it. Get the lead out of aviation gasoline. It is a terrible assault on this and other communities.

Comment Number: EPA-HQ-OAR-2022_0389-0554-0001

Commenter Type: Private Citizen

Commenter: JP Herman

Organization:

Excerpt Text:

The hazards from lead particularly to our kids are well established so please do what is necessary to eliminate lead pollution. We must assume the fuel from these little planes contribute heavily to local lead levels clearly endangering our citizens so please propose and adopt an endangerment finding so we can move forward with appropriate regulation

Comment Number: EPA-HQ-OAR-2022_0389-0588-0002

Commenter Type: Private Citizen

Commenter: Terry Burns

Organization:

Excerpt Text:

Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead and suffering health damage.

Comment Number: EPA-HQ-OAR-2022_0389-0607-0002

Commenter Type: Private Citizen

Commenter: Pamela Lowry

Organization:

Excerpt Text:

Every day that leaded gasoline is used in piston-engine aircraft, these and other communities across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0714-0006

Commenter Type: Private Citizen

Commenter: Ellie Lichti

Organization:

Excerpt Text:

It is apparent that several air quality monitoring and modeling studies have already identified violation of NAAQs in surrounding airport environments, which is a notable cause for concern.

Comment Number: EPA-HQ-OAR-2022-0389-0178-0002

Commenter Type: Local Government

Commenter:

Organization: Town of Middleton-Wisconsin

Excerpt Text:

In addition, we are requesting that the US EPA consider the attached information in making its endangerment finding determination as part of the EPA's docket.

Please find the attached Town of Middleton commissioned Trinity Consultants airborne lead study reports regarding the City of Middleton Municipal Airport-Morey Field (a/k/a "C29" and "Morey Airport"). The first Trinity Report models the airborne lead from leaded aviation gas emissions from C29 aircraft using the EPA preferred AERMOD software. The second Trinity Report validates the modeling study, and confirms the presence of breathable airborne lead at ground-level from C29 aircraft using leaded aviation gas. The C29 aircraft fly repetitively at low altitudes over this densely populated area comprised of many residences, school, playgrounds, parks, and athletic fields and poses an urgent public health risk to the community.

Comment Number: EPA-HQ-OAR-2022-0389-0211-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Indeed, a recent study documented elevated lead concentrations in the air around a small airfield in

Wisconsin [Footnote 1: Data available here: https://town.middleton.wi.us/vertical/Sites/%7B97A50AAB-3824-4833-ACEA-EF2B9A14C856%7D/uploads/USGS_Morey_Airport_Presentation.pdf], mirroring studies from elsewhere finding elevated environmental lead concentrations near airports [Footnote 2: E.g., McCumber and Strevett. 2017. A geospatial analysis of soil lead concentrations around regional Oklahoma airports. *Chemosphere* 167:62-70; Carr et al. 2011. Development and evaluation of an air quality modeling approach to assess near- field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment* 45: 5795-5804] and elevated blood lead levels in children living near airports.[Footnote 3: E.g., Miranda et al. 2011. A geospatial analysis of the effects of aviation gasoline on childhood blood lead levels. *Environmental Health Perspectives* 119: 1513-1516; Zahran et al. 2017. The effect of leaded aviation gasoline on blood lead in children. *Journal of the Association of Environmental Research Economics* 4: 575-610; Zahran et al. 2022. Leaded aviation gasoline exposure risk and child blood lead levels. *PNAS Nexus* 1: 1-11.]

Comment Number: EPA-HQ-OAR-2022-0389-0221-0002

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Consider the following items, stated to the best of my knowledge and awareness.

- 1) The NMC flight school has used leaded aviation gas for its piston-engine aircraft (most if not all of its fleet) since inception, around 1967. In the past, lead levels in aviation gas were higher than they are at present.
- 2) The NMC flight school piston-engine aircraft operations are primarily repetitive touch-and-go circuits repeated thousands of times a year with the following characteristics: the one or two preferred flight paths are mainly over affordable housing located in near-airport neighborhoods of Traverse City and its surroundings, which raises social and environmental justice issues; the preferred flight patterns up until 2022 and perhaps still ongoing are over or near two schools; fair weather, low-wind speed and relatively low altitude flight operations; up to three planes in operation at a time, each flying in close succession to the airplane preceding it. My understanding is that, in general, touch-and-go flight school operations make use of full-throttle of the engine for much of the touch-and-go circuit, resulting in higher than normal rates of lead particulate emissions from these piston-engine aircraft.
- 3) Flight school touch-and-go operations are generally conducted at altitudes above the ground surface of less than approximately 1,000-1,500 ft and NMC flight school operations are likely similar. As a result, much if not most of the NMC piston-engine aircraft flight paths are below an altitude where abundant atmospheric mixing of aircraft exhaust and ambient air occurs. This exacerbates the harm to public health and welfare.
- 4) The NMC flight school used nearly 64,000 gallons of “low-lead” 100LL aviation gas in 2019 – the only year for which NMC provided data. This amounts to an estimated annual release in combustion emissions of approximately 300 lbs/yr of lead into the local environment as a result of its operations, which are primarily touch-and-go. The cumulative release is estimated at nearly 16,500 lbs over the past 55 years.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0006

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

9) Neither NMC Trustees, NMC management, Cherry Capitol Airport management, or FAA representatives have contested the germane facts, the essential ones of which have been presented to them and numerous others in written communications, as described below.

10) NMC Trustees and management have indicated that they are entitled to operate the NMC flight school in the manner that they do and have – as documented in their written communication with me, implicitly messaging that NMC flight school program objectives override child, public and environmental health and welfare.

Lead Emissions and Exposures Associated with Northwestern Michigan College’s Flight School Operations

I became aware in March of 2021 of a potential serious source of environmental and public health aviation-related degradation not only in my Oakwood Addition neighborhood, in Traverse City, Michigan, but in other neighborhoods adjoining or near the Cherry Capitol Airport. This awareness developed as a result of my initial curiosity and interest in NMC flight school noise in the community related to NMC’s flight school’s touch-and-go operations. My research led me to understand and conclude that NMC flight school noise is a good proxy for NMC flight school lead emissions over these same neighborhoods. And this is likely true for many if not most of the approximately 1000 flight schools operating today in the U.S. that rely on leaded aviation gas. This degradation results from nanometer-sized lead particulates emitted by NMC flight school piston-engine aircraft, ongoing for nearly a half century, after starting in 1967, and presently ongoing, unless something has changed in the past few months, which is unlikely, but not impossible.

My understanding is that the FAA, Cherry Capitol Airport and NMC chose to not inform, for over a half century, a single member of the impacted Traverse City area public concerning these lead particulate exposures. I have no information that would indicate that they have recently changed anything in that regard.

The fine-particle nature of lead released from piston-engine aircraft operations has been described by J.D. Griffith (Electron microscopic characterization of exhaust particles containing lead dibromide beads expelled from aircraft burning leaded gasoline, Atmospheric Pollution Research 11 (2020) 1481–1486). These extremely small lead particles, considerably smaller than the lead particulates associated with automotive combustion of leaded gasoline, are especially problematic for children due to their relatively high rate of respiration, and the relative ease with which such small particles, once inhaled, can enter their bloodstreams, brain, organs and bones.

Lead is a very dense substance and there is every reason to anticipate that once released into the atmosphere as particulate matter, it will settle out relatively quickly, as compared to being transported far away by dispersion and other atmospheric transport processes. This is especially anticipated due to the relatively low altitude of the touch-and-go flight patterns.

This willful history of lead particulate emissions over vulnerable Traverse City neighborhoods by NMC, coupled with NMC’s willful inaction to notify the community about the emissions and exposures, are part of NMC’s legacy. It is also a part of the FAA’s legacy, as the FAA allows the lead emissions and exposures and does not and has not stipulated public notification thereof, and has gone a step further, approving NMC’s flight training school (according to NMC). Finally, these surreptitious, invisible, tasteless, odorless lead emissions and the associated exposures are part of the following individuals’ records: FAA Regional Administrator Rebecca MacPherson, NMC Aviation Program Director Alex Bloye, NMC President Nick Nissley, NMC Trustees Rachel A. Johnson, Laura J. Oblinger, Kenneth E. Warner, Andrew K. Robitshek, Douglas S. Bishop, Chris M. Bott, Kennard R. Weaver, and Cherry Capitol Airport Director Kevin Klein. It is also part of their predecessors’ records.

It is worth noting that the FAA has traditionally had and continues to have a very accommodating attitude concerning piston-engine aircraft aircraft noise and this matter offers no exception. Since piston-engine aircraft noise is a proxy for the known and knowing dispersal of lead particulate contamination and the consequent human exposure, it should be understood by all that NMC has, through its adoption of touch-and-go routes, determined that the environmental and public health and welfare in certain neighborhoods in the Traverse City area will be degraded by and for the benefit of NMC and its flight school, under the approving and watchful eyes of the FAA, FAA Air Traffic Control, and the Cherry Capitol Airport, as NMC is its client.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

The rule is strongly supported by decades of scientific studies, past policy outcomes associated with decreased lead burden in populations, and the Biden administration's final lead strategy (CFR, 2022). The draft published analysis for this proposed rule was developed from a variety of connected studies and technical methodologies that follow the classic source to exposure to health effect continuum (Teegarden JG, et al. 2016).

This comprehensive analysis by EPA documents a case for public health endangerment based on the potential for NAAQS violations near general aviation airports. The lead NAAQS is a level of airborne lead that is set to be protective against a 2-point IQ loss. EPA's analysis certainly provides strong evidence that airborne lead levels are not protective of the lead NAAQS IQ decrement, but we would like to make clear that since there has been no safe exposure level of lead found, this analysis albeit thorough, analytically sound, and well documented is not based on fully health protective assumptions.

Moreover, the lead NAAQS are not a good measure of whether leaded avgas endangers public health since the standard is quite outdated (last updated in 2008) and is not health protective, permitting significant IQ loss. EPA missed its October 2021 deadline for reviewing and revising the lead NAAQS. Even if areas around an airport are compliant with the lead NAAQS, public health and particularly children's health could still be endangered. That said, the fact that the lead NAAQS are potentially exceeded shows how great a public concern leaded avgas is.

Monitoring studies of general aviation airports resulted in two demonstrated exceedances of the NAAQS using particulate monitoring. The monitoring studies employed a filter-based particulate capture methodology, which therefore does not capture gas-phase organically substituted lead. As a result, potential exceedances of the lead NAAQS are likely to be occurring at more than the reported number of small airports tested.

Lead from piston-engine aircraft is emitted in both gas and particle phase, and so health protective monitoring would include both gas phase and particle collection methods, and air dispersion modeling would need to be set up such that deposition algorithms as well as gas phase transport was appropriately parameterized. Therefore, potential NAAQS violations at small airports is well supported based on the particulate-based ambient air monitoring since this method did not capture all potential lead species.

Due to the underpredictions of potential NAAQS violations at small airports demonstrated by ambient air monitoring, EPA set up an air dispersion modeling study of 13,000 airports. Modeled predictions of lead concentrations, annual averages, and 3-month rolling averages for lead NAAQS compliance

demonstration were estimated based on a sensitivity analysis. Locations and activity levels were varied to test potential concentration and location maxima.

Lead is also a persistent bioaccumulative toxicant, and risks from historic lead deposition to soil and surface waters, with resuspension from soils as discussed by EPA from Heiken et al. 2014, has been and is an ongoing source of potential exposures and harm. Source apportionment of soil lead from deposition and resuspension is technically challenging due to the dynamic processes and treatment of topsoil, although it is unclear to what extent EPA accounted for resuspension in their modeled estimates for airborne concentrations of lead. This process of deposition and resuspension is also an important contributor to future potential harm. Therefore, it is important to assess both lead resuspended, emitted, and entrained in the air as well as lead that can enter terrestrial and surface water environments and the food chain.

Comment Number: EPA-HQ-OAR-2022-0389-0234-0002

Commenter Type: Professional Association

Commenter:

Organization: National Association of Clean Air Agencies (NACAA)

Excerpt Text:

NACAA supports this action in which the EPA Administrator proposes to find “that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act” and, further, “that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.”[Footnote 2: Ibid, 62,753.] The basis of these findings is the comprehensive review and consideration by agency experts of extensive scientific evidence that has been accrued over decades and peer-reviewed by EPA’s Clean Air Scientific Advisory Committee,[Footnote 3: <https://casac.epa.gov/ords/sab/f?p=105:17:11377933030519>] as described in the action.

“Covered aircraft” under this proposal are any aircraft capable of using leaded aviation gasoline. The majority of these covered aircraft are piston-engine powered, most typically small aircraft that carry two to ten passengers, which represent the largest single source of lead emissions into the air in the U.S. In 2008, piston-engine aircraft contributed 59 percent of total U.S. lead emissions into the air; by 2017, the contribution climbed to 70 percent because of decreasing emissions from other ambient lead sources.[Footnote 4; Supra note 1 at 62,761.]

As EPA notes, it is not proposing aircraft lead emission standards in this action. Should the agency finalize these findings, it would then move forward to propose and take comment on emission standards under Clean Air Act section 231.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0015

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The EPA itself has repeatedly recognized the significant contribution of avgas to harmful levels of lead air pollution. In its 2020 study of airborne lead concentrations at U.S. airports, the EPA concluded that general aviation airport operations increase lead air concentrations, particularly in downwind areas.[Footnote 55: See U.S. EPA, Model-extrapolated Estimates of Airborne Lead Concentrations at

U.S. Airports 3 (Feb. 2020), available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>. The EPA also acknowledged that, by considering only airborne lead, its model was scoped conservatively. To reflect the full range of exposures to leaded avgas among populations near airports, the analysis would need to account for potential exposures to emitted lead particles that settle in nearby water and soil. Id. at 5.] The EPA’s study also identified a subset of airports where the lead emissions might potentially be violating national ambient air quality standards.[Footnote 56: Id. at 3, 53 (Table 6).]

Data from our own communities bolster this conclusion. A report commissioned by the Town of Middleton, Wisconsin confirms that the use of leaded avgas by piston-engine aircraft spreads breathable airborne lead particles over nearby communities.[Footnote 57: Morey Airport Lead Study, supra note 12. Trinity Consultants conducted ambient air sampling to measure actual ambient lead concentrations at selected locations around Morey Airport. This report builds off a previous study commissioned by the Town of Middleton, in which Trinity Consultants and Oak Leaf Environmental modeled ambient air quality using EPA’s AERMOD model to evaluate ambient concentrations of lead in the air around Morey Airport based on assumptions regarding the lead content of the fuel being used, flight patterns and airport activity.]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0003

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Leaded avgas is a significant and preventable source of airborne lead pollution.

Leaded avgas is “the only remaining lead-containing transportation fuel,” and its combustion is the single largest contributor of airborne lead emissions in the United States.[Footnote 9: FAA, Aviation Gasoline, <https://www.faa.gov/about/initiatives/avgas>; 75 Fed. Reg. 22,440, 22,444 (April 28, 2010)] Piston-engine planes powered by leaded avgas are responsible for nearly three-quarters of lead emissions nationwide.[Footnote 10: See EPA, 2017 National Emissions Inventory Data, <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq> (using Sector Summaries Data Query information for mobile aircraft lead emissions and national lead emissions for all sectors).] The most recent national emissions data from EPA shows these planes released more than 930,000 pounds of lead into the atmosphere in 2017.[Footnote 11: Id. (searching Sector Summaries Data Query for national lead emissions from the mobile aircraft sector).]

There are now more than 200,000 piston-engine planes operating out of some 19,000 general aviation airports across the country.[Footnote 12: 75 Fed. Reg. 22,440, 22,444 (April 28, 2010); United States Bureau of Transportation Statistics, Active U.S. Air Carrier and General Aviation Fleet by Type of Aircraft, <https://www.bts.gov/content/active-us-air-carrier-and-general-aviation-fleet-type-aircraft-number-carriers-0>; see also 49 U.S.C. § 47102(8) [defining general aviation airport].] These general aviation airports are often located near densely populated metropolitan areas, communities impacted by environmental hazards and risks, and sensitive land uses such as homes and schools. According to EPA, lead pollution concentrations in and around airports are higher than in areas without a lead-emitting source.[Footnote 13: 75 Fed. Reg. 22,440, 22,442 (April 28, 2010).]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0005

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

The lead exposure risk from avgas peaks within 500 meters (a little more than ¼-mile) of an airport runway. Researchers describe this distance as “the maximum impact area for ground- based lead emissions from piston-engine powered aircraft.”[Footnote 18: EPA (2020), National Analysis of the Populations Residing Near or Attending School Near U.S. Airports at 9, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG4A.pdf>.] One study identified and defined nine sources of lead emissions at general aviation airports and pinpointed three sources: the run-up areas, taxiways, and takeoffs—as the primary contributors of lead emissions from those airports.[Footnote 19: Feinberg, S. et al. (2016), Modeling of lead concentrations and hot spots at general aviation airports, Transportation Research Record: Journal of the Transportation Research Board, No. 2569 at 84-86.] When these lead-producing activities are located close to each other on airport grounds, lead emissions accumulate and form lead “hot spots,” which are “localized, relatively high concentrations of airborne lead relative to background concentrations.”[Footnote 20: National Academies of Sciences, Engineering, and Medicine (2021), Options for Reducing Lead Emissions from Piston-Engine Aircraft at 41.]

These lead hot spots compromise air quality for the surrounding communities. Of the 16 million people living within a half-mile of a general aviation airport, five million live within this maximum impact area (500 meters of an airport runway) and 363,000 of these people are children five years old and younger.[Footnote 21: Id. at 12-13.]

Comment Number: EPA-HQ-OAR-2022-0389-0265-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

Lead has been detected in the air and soil around Merrill Field in Anchorage, Alaska. Data collected from an air quality station near one of the runways between 2011-2012 showed that lead levels ranged from 0.001 to about 0.115 parts per billion (ppb) on any given day depending on the number of flights on the runway (EPA, 2015). This is far from a comprehensive assessment and additional monitoring is necessary here as well as at airports throughout the state.

Comment Number: EPA-HQ-OAR-2022-0389-0168-0001

Commenter Type: Private Citizen

Commenter: María Reyes

Organization:

Excerpt Text:

The mission of the EPA is to protect our health and environment.

This has been the mission of this department since it was founded back in 1970, however, the Cassell Community is not being protected by your agency. During the last 40 years our minority community has suffered the injustice of the single piston airplanes that continue flying in and out of this airport 24/7.

On November 3, 2022, your agency announced that there would be 132 projects that would monitor the air quality in our communities. This project was allocated the sum of 53M dollars. Not one of these air monitor projects was considered for this nuisance airport.

In 2008, the EPA cited Reid Hillview Airport. In 2020 Santa Clara County finally stated what our communities already knew, yes there is lead at Reid Hillview Airport. This lead contamination is not solely found inside Reid Hillview Airport, but continue to spread into our communities through the air. The same air we all breathe.

You were appointed by President Biden under the Justice 40 initiative. This initiative contains rules and regulations, but these rules and regulations do not work unless they are applied, followed and changes are made.

Recently the EPA sponsored a hearing for public comments; once again, what good does it do if our comments continue falling on deaf ears?

Comment Number: EPA-HQ-OAR-2022_0389-0630-0001

Commenter Type: Private Citizen

Commenter: Meredith Randall

Organization:

Excerpt Text:

When I was in middle school we moved to a new town. I thought it was so cool that I could watch airplanes take off and land from my parents bedroom window. The exhaust from jets and lead emissions from prop planes showered down on our home. Our new home was directly under the flight path and about 1/2 mile from the end of the runway. In those days, my parents didn't know the risks their move was introducing to our health. You have the authority and the responsibility to protect American families from this harm.

Comment Number: EPA-HQ-OAR-2022-0389-0212-0001

Commenter Type: Private Citizen

Commenter: Ken Engelman

Organization:

Excerpt Text:

I am writing to share my extreme concern with Avelo 737 airplanes using lead fuel now flying low over our residential homes in Branford, East Haven, and New Haven Connecticut (Connecticut shoreline communities along the protected Long Island Sound). Tweed New Haven Airport (home of Avelo) is located in a residential zoned community that includes some areas that are Environmental Justice protected and we all should be protected from billion dollar investment businesses (Goldman Sachs) trying to force this airport expansion onto us making us breathe jet fuel fumes every day in our homes, backyards, playgrounds, and on the beaches. As the CDC states, "exposure to high levels of lead may cause anemia, weakness, and kidney and brain damage. Very high lead exposure (from Avelo 737 and other airplanes) can cause death. Lead can cross the placental barrier, which means pregnant women who are exposed to lead also expose their unborn child. Lead can damage a developing baby's nervous system". Lead is being forced into our lungs because a business with more money than anyone else is pushing their business need before our health and wellness needs where we live and that is not right. Please PROTECT US and the environment from Goldman Sachs, Aports, Avelo, and all those that place a private investor needs before ours where we live, work, and play.

Response to Comments in Support of the Cause or Contribute Finding (Emissions and Concentrations of Lead from Covered Aircraft Engines)

In Section V.C of the final notice for this action, the EPA notes that numerous commenters state their support for the proposed cause or contribute finding, in some cases noting that ample evidence supports this finding and highlighting the important role that lead emissions from covered aircraft engines have in local environments in many areas of the U.S. Additional commenters expressed concern regarding monitored lead concentrations that exceed the NAAQS at some airports. EPA responds to these comments in Section V.C of the final notice for this action and provides responses on additional points below.

Some commenters expressing support for the cause or contribution finding note that the second inquiry, the cause or contribute finding, requires only a contribution to emissions from certain classes of aircraft emissions. They further note that the ordinary meaning of “contribute” . . . means simply “‘to have a share in any act or effect’ . . . or ‘to have a part or share in producing, and further describe that the term “does not incorporate any ‘significance’ requirement.”³³ Similarly, one commenter states that under section 231 of the Clean Air Act, a pollution source need not be a “major” source of dangerous air pollution nor even make a “significant” contribution to it to satisfy the cause or contribute prong of the endangerment determination.³⁴ One commenter states that there is ample evidence to support the proposed determination that lead emissions from covered aircraft cause or contribute to lead air pollution. We acknowledge these comments. We further note that we agree with the commenters that there is ample evidence, as described in Section V.B of the final notice for this action, that lead emissions from engines in covered aircraft cause or contribute to lead air pollution within the meaning of CAA section 231(a)(2)(A), and as described in Sections III.A and III.B of the final notice, we agree that in considering whether emissions of an air pollutant cause or contribute to air pollution under CAA section 231(a)(2)(A) the Administrator need not find that emissions from any one sector or class of sources are the sole or even the major part of an air pollution problem to make an affirmative cause or contribute finding, nor does this provision require “significant” contribution.

Several commenters emphasize their conclusion that it is patently clear that lead emissions from aircraft cause or contribute to air pollution that is reasonably anticipated to harm public health and welfare. In drawing this conclusion, commenters state that such lead emissions are responsible for approximately 70% of lead emitted domestically into the atmosphere each year, and some comments compare that to percentages of the inventory that they state were present in analogous findings by EPA, citing, for example, a statement in the 2016 Findings that the collective GHG emissions from the classes of engines used in U.S. covered aircraft represented 2.8 percent of total U.S. emissions and that out of the airports monitored, two exceeded the maximum three-month average concentration outlined in the NAAQS. Another commenter indicates that the second inquiry of the endangerment finding test is easily satisfied, stating that avgas is the single largest source of U.S. lead air pollution and their view that multiple studies confirm the link between general aviation airports and elevated blood lead levels in children living and attending school nearby. Related comments argue that given that emissions of lead from aircraft operating on leaded avgas make up the vast majority of domestic lead air pollution, it would be arbitrary and capricious for EPA not to finalize its cause or contribute finding. These commenters also state their view that research demonstrates that the lead emitted from piston-engine aircraft gets into the blood of children living in proximity to airports where these aircraft operate. We acknowledge these comments, and further respond that, for the reasons described in Section V of the final notice, the EPA agrees that the cause or contribute test under CAA section 231(a)(2)(A) is satisfied in this case and the Administrator is accordingly making a final cause or contribute finding. Because the cause or contribute finding is being

³³ Comment EPA-HQ-OAR-2022-0389-0223 (citing *Bluewater Network v. EPA*, 370 F.3d 1, 13 (D.C. Cir. 2004)).

³⁴ Comment EPA-HQ-OAR-2022-0389-0238

finalized, the EPA need not further respond to the comment that not finalizing this finding would have been arbitrary or capricious.

Some commenters raise concerns related to particular airports, particular types of airports or activities at airports (such as flight training), or particular types of aircraft. While some of these comments point to information that was included in the proposed findings, other comments include different or additional information beyond what was included in the proposed findings. For example, many commenters express concerns regarding planes and, in some cases helicopters, flying in and out of their local airport, and they state that smaller aircraft tend to fly at lower altitudes and take off and land over more densely populated areas. At least one commenter notes that the data that the EPA presented are impressive and argues that rural communities where flight training schools are the dominant users of the airports are also affected by airplane traffic, air pollution and noise pollution and states that he has observed that an equal if not greater portion of the pollution produced by training aircraft is “dumped” 10 to 20 miles away from the airports in areas some would label as disadvantaged rural communities.³⁵

Other commenters providing different or additional information that the EPA did not include in the proposal include comments stating the number of pounds of lead estimated to be emitted by covered aircraft in their state, county, or at their local airport; in some cases these comments state that the overall contribution of aircraft-associated lead accounts for a large, if not dominant, fraction of the estimated lead emissions to air in the state (e.g., one comment states that every year, airport operations result in 13,279 pounds of lead emissions in New York, which accounts for over 80 percent of all lead emitted into the air in the state). Several commenters include personal stories and experiences in their communities with regard to covered aircraft and lead emissions. Several of these comments were particularly related to lead emissions from aircraft conducting flight training. Some local governments expressed concern regarding the emissions of lead from aircraft at airports in their communities, and some described their work to mitigate emissions by transitioning to unleaded fuel. Some commenters describe data that they conclude to support their assertion that concentrations of lead in the air increase near airports where these aircraft are active. Some of these comments point to data EPA provided in the proposal for this action, while another commenter submitted information to the docket for this action reporting monitoring and air quality modeling data which they state confirms the presence of breathable airborne lead at ground-level from the use of leaded avgas at their local airport. One commenter cited the studies by Feinberg, et al., 2016, and the National Academies of Sciences (2021), to support their statement that when aircraft activity occurs in run-up areas, taxiways, and takeoffs that are close to each other, the combined emissions form lead “hot spots” of “localized, relatively high concentrations of airborne lead relative to background concentrations.” Citing EPA’s airport lead monitoring study and results of a soil screening study, one commenter stated that lead has been detected in the air and soil around Merrill Field in Anchorage, Alaska. One commenter asserted that there are recorded lead concentration levels that exceed federal standards at the Reid-Hillview airport. The EPA acknowledges these comments in support of the cause or contribute finding and notes that, for the reasons described in Section V of the final notice, in this action the Administrator is making a final finding that engine emissions of the lead air pollutant from covered aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare.

In response to the comments citing or providing data or other information that is different from or goes beyond what is addressed in the proposed or final action, the EPA notes that the data, information, and analyses that support the final cause or contribute finding are described in Section V of the final notice. The EPA does not interpret these supportive comments as indicating disagreement with the data, information, and analyses discussed in the proposed cause or contribute finding, but rather understands these comments to suggest that the additional information they provide could also be considered as support for finalizing the findings. As the data, information, and analyses summarized in Section V

³⁵ See Comment EPA-HQ-OAR-2022-0389-0196.

provide ample support to finalize the cause or contribute finding, the EPA need not evaluate whether other information could provide additional support for finalizing the cause or contribute finding. Further, even if the EPA were to agree with these commenters that this information could offer additional support for the cause or contribute finding, considering the information would not change the Administrator's final decision on the cause or contribute inquiry, as there is already sufficient information to support an affirmative finding based on the information described in Section V of the final notice. We further respond that to the extent these comments raise concerns regarding aircraft or airports that do not appear to be related to lead or the proposed action (such as concerns about noise pollution, other assorted effects from aircraft or airports, or air pollution in general) and without explaining how those concerns relate to the proposed action, they are beyond the scope of this action and thus require no further response. In response to the comment asserting that there are recorded lead concentration levels that exceed federal standards at the Reid-Hillview airport, we believe that assertion is incorrect. The commenter appears to be incorrectly interpreting model-extrapolated results from EPA's 2020 study to suggest this airport may have concentrations exceeding the federal standards at the maximum impact site. Monitoring data at this airport, collected 65m downwind from the maximum impact site, did not exceed the federal standards.

Some comments state or suggest that lead emissions from aircraft that use leaded avgas contribute to particular health issues or have harmful effects on the communities near airports where these aircraft operate. Some of these comments say that there is no safe level of lead and that any lead in the human body is dangerous, or that there is no acceptable or safe amount of lead for humans at any age, attributing these views to the EPA. While noting that these comments seem intended to support the findings, the EPA responds that these comments appear to conflate the endangerment determination and the cause or contribute determination. As noted in Section 5.1 of this RTC document and described more fully in Sections III.A and III.B of the final notice, the Administrator is making two separate and distinct affirmative findings in this action, one for the endangerment prong and one for the cause or contribute prong. These findings are not a risk assessment regarding the potential human health or welfare harms for those living in close proximity to airports where lead emissions occur. Further, with respect to the commenters' assertions that there is no safe level or amount of lead, and the attribution of that view to the EPA (which is not an EPA statement), it is unclear whether the commenters intend to refer to a particular EPA statement in this context. As described in Section IV.A.2 of the final notice for this action, the EPA has previously noted with regard to lead exposures, for which blood lead is the most commonly studied indicator, "there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure,"³⁶ but that is a more limited statement than the ones commenters attribute to the EPA. The EPA responds to a similar comment related to the EPA's Advance Notice of Proposed Rulemaking on Lead Emissions From Piston-Engine Aircraft Using Leaded Aviation Gasoline that EPA issued in 2010 in section 7.3 of this RTC document.

One comment states the view that while air lead concentrations exceeding the NAAQS are a particular concern, airport lead emissions are detrimental regardless of whether they cause exceedances of the lead NAAQS. This comment further states that, in the commenter's view, lead pollution is unsafe and can cause significant and irreversible damage to human health at any level of exposure, with incremental harms to cognition most severe at lower exposure levels. The EPA responds that, as noted in Section V of the final notice for this action, contributions to concentrations that exceed the lead NAAQS are of particular concern to the Administrator. The EPA further notes in response that we address comments related to the adequacy of the lead NAAQS in Section 8.2.1 of this RTC document. For the reasons described in that section, comments on the lead NAAQS itself are outside the scope of this action and thus require no further response. To the extent that the comment's assertion that the commenter's statement that airport lead emissions are detrimental regardless of whether they cause exceedances of the

³⁶ EPA (2013) ISA for Lead. Executive Summary "Effects of Pb Exposure in Children." pp. lxxxvii-lxxxviii. EPA/600/R-10/075F, 2013. See also, National Toxicology Program (NTP) (2012) NTP Monograph: Health Effects of Low-Level Lead. Available at <https://ntp.niehs.nih.gov/go/36443>.

lead NAAQS is premised on the asserted criticisms of the lead NAAQS, it would be similarly beyond the scope of this action, as the EPA could not fully evaluate the comment without resolving issues that are outside the scope of this action. Further, to the extent that these comments suggest that a cause or contribute finding under CAA section 231(a)(2)(A) should be based on conclusions about whether airport lead emission are detrimental, the EPA responds that these comments conflate the endangerment determination and the cause or contribute determination for the same reasons identified in the prior paragraph of this RTC document.

The EPA notes that the responses in this section are focused on aspects of comments expressing support for the cause or contribute finding, in particular those aspects relating to the emissions of lead from covered aircraft engines contributing to the lead air pollution, lead inventories and lead concentrations in air. Responses to other aspects of these comments can be found in other sections of this document. For example responses to: comments regarding environmental justice and equity are in Section 3, children's health and their potential exposures near airports where covered aircraft operate, are in Section 4, comments regarding the health and welfare effects of lead are addressed in Section 5.1, comments requesting that the EPA ban leaded avgas and work with the FAA to regulate lead from aircraft are addressed in Section 7, comments regarding the lead NAAQS and comments requesting monitoring in communities near airports are addressed in Section 8.2.1, comments requesting education and outreach are addressed in Section 8.2.2, other requests of the EPA (such as soil lead testing) are addressed in Section 8.2.4, the response to comments regarding the FAA's duties are addressed in Section 8.3, the response to comments regarding the cost of creating new aircraft fuels and reengineering aircraft engines to accommodate new fuels are addressed in Section 8.4, and comments regarding unleaded fuel alternatives and engines that can operate on unleaded avgas are addressed in Section 8.5.

6.1.2. Past Trends and Future Projections in General Aviation Activity

Comment Number: EPA-HQ-OAR-2022_0389-0732-0002

Commenter Type: Other

Commenter:

Organization: Broadway Flushing Homeowners Association

Excerpt Text:

I am writing in my capacity as the current president of the Broadway Flushing Homeowners Association, representing over 300 hundred homeowners in Northeast Queens, NY, to ask that you please pay attention to this public health crisis in the making. My neighborhood is besieged with an alarmingly increasing volume of low airline traffic for years from LGA. Besides the assault on our hearing with the excessive noise that causes sleep disruption and anxiety, now there is evidence of unacceptable lead emissions, too.

Comment Number: EPA-HQ-OAR-2022-0389-0207-0001

Commenter Type: Private Citizen

Commenter: Wisconsin Ecolatinos

Organization:

Excerpt Text:

The City of Middleton, Wisconsin, approved the expansion of Middleton Municipal Airport, also known as Morey Airport. The airport already has significant air traffic of small aircraft in a heavily residential area. This small aircraft primarily uses leaded aviation gas, also known as Avgas. The expansion will increase air traffic and the use of Avgas in this airport, increasing Lead contamination of the air in the surrounding area.

Comment Number: EPA-HQ-OAR-2022-0389-0260-0002

Commenter Type: Private Citizen

Commenter: Robert Barrows

Organization:

Excerpt Text:

3. Activity from piston powered aircraft at Beverly Airport increased astronomically beginning in mid-2020. Many of us in our neighborhood have lived in our homes for close to 40 years and prior to mid-2020 we never heard or saw any of the piston powered planes that fly over our homes many days at the rate of 150 per day and takeoffs occurring every 30-45 seconds. This is attributable to a new airport manager that aggressively increased activity at the airport in order to make it an attractive alternative to Logan, significant increase in flight training and touch and go activity and the airport no longer complying with its Noise Abatement and Good Neighbor Policy which resulted in piston powered aircraft avoiding flying over Noise Sensitive Areas that were the most densely populated neighborhoods surrounding the airport including our heavily populated Danvers neighborhood.

We no longer want our lives and health put at risk as we have recently because of the dangers associated with lead poisoning. Because of this, the airport should be required to strictly adhere to its Good Neighbor and Noise Abatement Policy as it did previously using its Preferred Runway to avoid the most densely populated areas surrounding the airport. They can continue to do their training like they did during the first 35 years I lived in my home, just don't put my family and me at risk and do it over my neighborhood any longer. Flying airplanes is a privilege (particularly recreational flying), and the safety of the people living in the neighborhoods around the airport should take precedence because it is a right.

Comment Number: EPA-HQ-OAR-2022_0389-0530-0006

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

The toxicity of lead was recognized as early as 2000 BCE. Since the 1700's it has been common knowledge that handling lead causes sickness or worse. Lead paint was banned from residential use in 1978. Lead was banned from automobile gas in 1996.

The US piston-engine aircraft fleet is growing by leaps and bounds. The vast majority of these planes use leaded fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0531-0001

Commenter Type: Private Citizen

Commenter: Victor Babbitt

Organization:

Excerpt Text:

I am a resident of Superior, Colorado. We are near the Rocky Mountain Municipal Airport (RMCA). This airport is advertising themselves as the place to get your pilots license or gain hours toward certain certificates. Currently, these single or dual engine prop plane fly directly the residential homes of Superior, as often as once a minute. I actually tracked 42 planes in a single hour flying directly overhead my house, at very low altitudes. Every one of these private planes are using leaded fuel. In this case the solution is quite simple. If the RMCA directed pilots to bank left upon leaving the runway, they would overfly highway and open space, and not be a health and noise hazard to us in the residential area.

Comment Number: EPA-HQ-OAR-2022_0389-0556-0001

Commenter Type: Private Citizen

Commenter: Patrice Curedale

Organization:

Excerpt Text:

[FL TEXT REMOVED] One Santa Clara, CA study found that children living around a small airport had lead levels similar to those found in Flint, Michigan children at the height of their water, crisis! This danger has been documented for decades. And studies around small airports do not even touch on our agriculture's use of piston engine planes. As the small plane industry booms, in spite of the climate crisis, it is contributing to lead pollution, water, pollution, noise, pollution, and very deadly small particulate pollution. Lead pollution is actually the easiest of these to tackle. Where is your concern? [FL TEXT REMOVED] Sincerely, Patrice Curedale Topanga, CA 90290

Comment Number: EPA-HQ-OAR-2022_0389-0769-0004

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

The Long Beach airport has 20% more general aviation operations than in 2021, which according to my research could put them at #1 in the country over Deer Valley airport for lead emissions. Long Beach airport has over 360,000 GA operations each year.

Comment Number: EPA-HQ-OAR-2022-0389-0155-0001

Commenter Type: Private Citizen

Commenter: Rachel Stanton

Organization:

Excerpt Text:

I live near 2 General Aviation airports in a suburban community. There are many children in the area who are being exposed to lead pollution due to the vast increase in aviation activity in the last 3 years. Particularly egregious are the pilot training schools who have drastically increased operations. Leaded fuel was banned in all other combustion engine vehicles because of its extreme hazards to human health. It is absolutely necessary for the EPA issue a finding consistent with that in the area of General Aviation. No amount of lead is safe.

Comment Number: EPA-HQ-OAR-2022-0389-0161-0002

Commenter Type: Private Citizen

Commenter: Maggie Glenn

Organization:

Excerpt Text:

I strongly agree with this proposed rule/finding and would really like to see it both passed and implemented. According to other information published by the EPA, lead pollution in the air has gone down since 2011. In order to continue this trend, I think there should be more findings posted, as well as

rules and regulations in place with these new findings. In 2020, before the hit of COVID-19, air travel was at an all time high. Leading up to this, air travel has increased every year. Once COVID-19 grew in concern, air travel decreased. As the world gets closer to normal again, air travel will go up once again. Since people have put off traveling for the last two years, many news outlets have predicted that the trends will once again increase. Due to this, I really believe that finding how aircrafts impact lead pollution, as well as other air pollutants, can help the EPA either amend current standards, or encourage airlines to decrease their pollution output.

Comment Number: EPA-HQ-OAR-2022-0389-0167-0002

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

(2) The engines typically using leaded gas are small aircraft (single or twin engine). These aircraft are very common in the flight training industry, which relies on the cheap additive to lower gas cost while still maintaining octane requirements. However, these smaller aircraft are commonly located in smaller regional or local airports - ones that are usually closer or integrated with residential communities. This combination poses a unique threat to health given the proximity and use of lead in these aircraft. (see attached file of Superior, CO look at local training airport use and the low flyovers of residential neighborhoods). Of note here is that over 200,000 takeoff/landings occur at RMMA at present by airplanes using leaded fuel. These flight paths occur over a number of community schools and residential areas at heights of only 1000'. These are not-intermittent, but rather circular touch and go landings by these flight schools. This places the majority of their operation within a narrow community resulting in a concentrated emission of leaded gas in this area (vice a longer distance flight that may travel many miles, thereby dispersing the effects of the emissions over a larger area). This poses an acute health threat that has an outsized risk on children in our local community.

Comment Number: EPA-HQ-OAR-2022-0389-0185-0005

Commenter Type: Private Citizen

Commenter: Alex de Rege

Organization:

Excerpt Text:

As the rule proposal explains, the consequences of unregulated lead pollution in the atmosphere are critical. However, there may be some people asking “why do we need to then regulate aircraft engines? Why can’t we just regulate other lead-polluting sources?” While this is an understandable argument, the importance of addressing aircraft engines cannot be understated. As the EPA points out, in 2017, aircraft piston engines constituted 70% of the total U.S. lead air emissions [Footnote 9: Ibid. pg. 62761]. This also comes after the fact that lead emissions have been decreasing since 2011 (and before), while piston-engine emissions have remained largely the same since 2011 [Footnote 10: Ibid.]. All this is to say that it is time to finally bring aircraft lead emissions to the same place that the total U.S. lead emissions are at. It is time to start regulating aircraft engines that operate on leaded fuels.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0013

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

So, what about the (ahem) Future of Civilization and Tetraethyl Lead (TEL) over the next decade. If you believe the Aviation propaganda sure sounds like there isn't any future for anyone W/O Tetraethyl Lead (TEL) until 2030 or sooner, right?

[**Bold: National Aeronautics and Space Administration (NASA) Detailed Study Shows Majority of United States Aviation Facilities Underutilized: Regional Commercial Grade Federal Aviation Administration (FAA) Towered Airports Ready for Immediate Distribution of Multiple Existing Unleaded Aviation Fuel's Across Entire United States!**]

WHAT - National Aeronautics and Space Administration (NASA) conducted a detailed study to articulate a consistent and complete vision for how Regional Air Mobility (RAM) could provide safe, convenient, sustainable air transportation.

NASA states that increasing the accessibility of Regional Air Travel more passengers might opt for air transport for mid-distance journeys of 50 to 500 miles via Regulated Regional Commercial Grade Airports while providing accessible resources for ANY future air mobility needs as technologies, capabilities and markets develop, mature and deploy for public use.

WHY - Regional Air Mobility (RAM) could fundamentally change how many in the US travel and receive goods by bringing the convenience, speed, and safety of air travel to all Americans, regardless of their proximity to a travel hub or urban center.

HOW - NASA discovered that 90 percent of the population live within a 30-minute drive of a regional airport, with only 60 percent in the same proximity to a Large Commercial Airport. While America is home to more than 5,000 airports, only [**bold: 30**] of these mega-airports serve [**bold: more than 70%**] of all travelers.

The [**bold: majority**] of US airports are [**bold: underutilized**] due to air transportation services trending towards putting more people into larger aircraft on well-traveled routes.

It's quite obvious there's a massive glut of Regional Commercial Grade Aviation infrastructure that is readily available & capable for implementation, support, immediate adoption and deployment of multiple [*italics: existing*] Unleaded Fuels as well as providing infrastructure for future air mobility energy needs including potential follow-on Unleaded Aviation Fuels under development as well as EV & Hydrogen infrastructure with Federally mandated or escalated direction, planning, & funding saving time, tax payer money and effort, but most importantly protecting critical Health, Safety & Welfare of vulnerable populations immediately.

Through targeted investments, Regional Air Mobility (RAM) could increase the safety, accessibility, affordability and sustainability of regional travel while building on the extensive underutilized Federal, State, and Local investment in our nation's infrastructure & airports AKA National Plan of Integrated Airport Systems (NPIAS).

Now is the time to shift the [**bold: vast**] amount of wasted abused taxpayer money to Long Term "Targeted Investments" in Municipal & Governmental Owned Public Access Regional Airports capable of supporting Commercial Aviation rather than DUPING Taxpayers into supporting Outdated, Out of Touch, Ridiculous "One-Size-Fits All" Personal Hobby Sport Recreational Social Entertainment Venues justified with Special Interest & Industry Lobbyist statistics, double-talk & gibberish.

BTW: the vast majority of these General Aviation (GA) "Aviation Assets" including fully 1/3 if not more of the so-called "General Aviation Fleet" and associated airstrips are [**bold: NOT**] Taxpayer problems now and [**bold: NEVER**] have been Taxpayer problems that have absolutely [**bold: nothing**] to do with the [**bold: future**] of [**bold: anything**].

These so-called “Aviation Assets” continue to provide Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) for a miniscule set of “Elite Users” with complete impunity & protection.

“Targeted Investments” translates into designating one Regional Level Airport / development & experimentation facility per each US County as a minimum starting point that are a Local Municipal, County, State or Federally owned Commercial Grade Federal Aviation Administration (FAA) Towered facility to maximize Safety and boost public [italics: confidence & acceptance].

BTW: 100% of the Continental US population is within 100km (62.1371 miles) of an international airport according to the International Civil Aviation Organization (ICAO).

Comment Number: EPA-HQ-OAR-2022-0389-0237-0001

Commenter Type: Trade Association

Commenter:

Organization: Industry Partners of the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative

Excerpt Text:

EAGLE was formed in March 2022 in response to the 2021 National Academies of Sciences Consensus Report “[Italics: Options for Reducing Lead Emissions from Piston-Engine Aircraft]” to facilitate the successful transition to lead-free aviation fuels for piston aircraft by the end of 2030, without compromising the safe and efficient operation of the General Aviation fleet.

The General Aviation (GA) industry consists of some 220,000 aircraft, supports nearly 1.2 million jobs, and generates an estimated \$245 billion in economic impact annually. It does not include military or commercial airline aircraft, although it does support those industries in ancillary ways. GA supports many additional functions besides recreational flying including but not limited to air ambulance, law enforcement, charter, commercial transport, business, disaster response, aerial firefighting, and critical flight training activities. Civilian Flight training is a key contribution to the national air transport system as the airlines are currently struggling to fill captain and first officer seats in the post-pandemic era.

The GA industry is intently focused on the need to remove lead from 100 low lead (100LL) avgas and is committed to do so by the end of this decade. Lead, specifically tetra-ethyl lead (TEL), is used in avgas as an additive to boost octane (fuel performance) and prevent engine knock (detonation) that could result in catastrophic engine failure and adversely affect operational safety. Octane is therefore especially important in high compression engines. It is estimated that 68% of the GA fleet can use lower octane unleaded fuels, such as 94 unleaded (94UL), which is currently available on the market in limited quantities. 100LL fuel may be used in both low and high compression engines; however, the remaining 32%, which also consumes 70-75% of all avgas sold in the US, must use higher octane avgas only to prevent catastrophic engine knock detonation. The total yearly consumption of all avgas in the US equates to approximately four (4) hours of automobile consumption in the US! Since the 1970s, lead emissions from avgas have been reduced by half. As stated, the GA industry is committed to eliminating lead entirely by the end of 2030 or sooner, without compromising the safe and efficient operation of the General Aviation fleet.

The aviation industry is focused on doing what it can until a proper unleaded substitute is widely available. One such unleaded 100- octane avgas was approved for use by a segment of the fleet in September 2022. General Aviation Modifications, Inc. (GAMI) received FAA authorization in 2021, commonly known as an AML-STC, or Approved Model List-Supplemental Type Certificate, to begin dispensing its G-100UL avgas. At the time of this writing, it is not yet available commercially. Additional unleaded fuel candidates are currently going through various test and evaluation protocols under the Piston Alternative Fuel Initiative (PAFI) program or the STC program before they may be authorized for production and distribution. These include Swift Fuels, Inc., which is pursuing STC authorization, while

collaborative efforts between Afton Chemical and Phillips 66, as well as LyondellBasell and VP Racing are going through the PAFI testing program currently underway at the FAA's Hughes Technical Center.

EAGLE is committed to facilitate the successful transition to lead-free aviation fuels for piston aircraft by the end of 2030, without compromising the safe and efficient operation of the General Aviation fleet.

Comment Number: EPA-HQ-OAR-2022-0389-0253-0001

Commenter Type: Private Citizen

Commenter: Patricia FitzGerald

Organization:

Excerpt Text:

I live directly under the flight path of touch and goes from Beverly airport, small engine planes, 11 to 20 hours a day. Sometimes up to five circling at the same time. These numbers of flights have increased tenfold in the last few years. The noise prevents us from using our yards, keeps us from being able to work at home, or even open windows, most days, and we live almost 4 miles away from the airport. It never used to be like this, I grew up here.

My concern for leaded fuel fumes coming from these planes is immense. There is no safe level for lead poisoning, and we are being poisoned on a daily basis. Our children are being poisoned!

I urge those in power to put a stop immediately to the use of leaded fuels in any of these planes. We cannot use them in our automobiles because of its poisoning capabilities, and we should not be able to use it in airplanes that fly over our homes and land and poison not only the air we breathe and the ground we walk on, but the land we grow food on, that our children and pets play on. We have a right to breathe clean air and you have no right to deny us that.

Comment Number: EPA-HQ-OAR-2022-0389-0258-0002

Commenter Type: State Elected Official

Commenter: Joan Lovely

Organization: Commonwealth of Massachusetts, Senate

Excerpt Text:

While we have removed lead from most products because of the many known dangers, its use has continued in aviation fuel. For those who live close to the airports serving this fleet, this poses serious health concerns. According to a 2016 study from the Agency, piston-engine aircraft, those commonly found flying out of small, regional airports, are the largest source of airborne lead in the country. These small airports are nestled into communities and neighborhoods, meaning that in addition to those working in the airport, neighbors, including small children, are living with constant lead exposure simply through the normal use of their homes and neighborhoods.

In the Second Essex Massachusetts State Senate District, which I am proud to represent, Beverly Airport has seen a sharp uptick in airplane traffic over the last two years. From 2020 to 2022, there has been a 29% increase in the number of flights to and from the airport. This increase brings more exposed of leaded fuels to the people of Beverly, Danvers, and Wenham, which surround the airport. There is no safe level of lead exposure. To allow the continued use of leaded fuels in these aircraft places those communities at an unfair risk of long-term health concerns and threatens the future generations of those communities. I urge the agency to designate leaded aviation fuel as a danger to the public health and welfare so that it may be appropriately regulated to ensure the health and safety of our residents.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0001

Commenter Type: Advocacy Organization

Commenter: Gary Keller

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

I am Gary Keller with Citizens Against Gillespie Expansion. A quick correction, an earlier remark from EAGLE initiative group stated that the amount of lead emissions has decreased significant over many years as if the GA industry had anything to do with it. It came down because the number of GA pilots decreased by 30 percent decreased while flight hours from GA aircraft decreased over a 40 percent over a 45-year period. And now it's going up again.

Comment Number: EPA-HQ-OAR-2022-0389-0189-0001

Commenter Type: Private Citizen

Commenter: VAl Lea

Organization:

Excerpt Text:

I live on the north side next to the Oakland County International Airport in Waterford Michigan. When I moved here almost 10 years ago the air traffic was not bad but in the last years it has increased substantially, as much as 20 fold.

I am very concerned about the noise and the effects of lead in the air and lead contaminating the soil and lakes nearby. I'm concerned for myself, the residents, and there are 3 schools nearby plus childcare centers.

The pilots of these planes and helicopters will fly around my neighborhood frequently multiple numbers planes at a time for hours almost every day starting as early as 8am to as late as 11pm.

I've contacted the airport, the airport manager, the county executive, and the FAA but have not had consistent, if any, help. It seems that the attitude is if you choose to live near an airport that you should expect to have issues. I believe the only real solution is for the EPA to establish regulations that will help protect citizens from the potential dangers.

The airport participates in the Fly Quiet program which can help to cut down on both the lead exposure and the noise. Unfortunately it is not consistently enforced. Lately there is one air traffic controller who does seem to try and get the pilots to cooperate but in general the task is difficult because one person with limited authority cannot solve the problem.

It's easy to minimize or ignore hidden dangers. Only the EPA can solve this problem.

Comment Number: EPA-HQ-OAR-2022-0389-0150-0001

Commenter Type: Private Citizen

Commenter: Jessica Darke

Organization:

Excerpt Text:

In Santa Monica, this is a real issue. My husband and I have noticed a dramatic increase in pollution and noise, coming from the sky. We don't take our infant daughter outside as much as we'd like because of the fear of the leaded emissions.

Please regulate air fuel! Lead and particulate matter emissions are responsible for silently and slowly

killing people in neighborhoods all over the world.

It's truly not fair that such a small minority is wrecking havoc on the livelihood of the majority.

We trust in you EPA to protect us.

Comment Number: EPA-HQ-OAR-2022_0389-0533-0007

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

The toxicity of lead was recognized as early as 2000 BCE. Since the 1700's it has been common knowledge that handling lead causes sickness or worse. Lead paint was banned from residential use in 1978. Lead was banned from automobile gas in 1996. The US piston-engine aircraft fleet is growing by leaps and bounds. The vast majority of these planes use leaded fuel.

Response to Comments Regarding Past Trends and Future Projections in General Aviation Activity

The EPA received many comments about aircraft activity and associated lead emissions. Some commenters describe examples of aircraft activity at airports near their local communities, expressing concerns about recent and future increases in activity that may lead to increased exposures to lead pollution and associated increases in risks to human health and the environment; at least one commenter states that the U.S. piston-engine aircraft fleet is growing and that the vast majority of these planes use leaded avgas. At least one commenter states that air travel increased every year before COVID-19, decreased during when COVID-19 grew in concern, and predicts that air travel will increase again as the world gets closer to normal again. Some commenters express concerns about certain types of aircraft activity, such as flight training. At least one commenter mentions a study of lead levels in children living near a small airport and further asserts that studies around small airports do not address agriculture's use of piston engine planes. This comment also states that “as the small plane industry booms, in spite of the climate crisis, it is contributing to lead pollution, water, pollution, noise, pollution, and very deadly small particulate pollution.”³⁷ In response, the EPA acknowledges these comments, and notes that as these comments provide information that appears intended to support the proposed cause or contribute finding, without suggesting that any aspect of the proposed findings should be finalized differently, the EPA does not consider these comments to be adverse to this action and thus they require no further response. The EPA further notes that, as described in Section V.D of the final notice for this action, the Administrator also has concerns related to lead emissions from covered aircraft, and for the reasons explained in that section, is finalizing the cause or contribute finding. In response to the comment about agricultural use of aircraft, the EPA notes that while we are unaware of studies evaluating the transport and fate of lead emitted by agricultural aircraft that operate on leaded avgas, we describe the activity of these aircraft in Section II.A.4.c of the final notice and the potential for lead emitted by these aircraft to deposit onto vegetation and surrounding soil. We further respond that to the extent these comments raise concerns regarding aircraft or airports or environmental issues that do not appear to be related to lead or the proposed action (such as general references to the climate crisis, noise, water, pollution, or particulate pollution) and without explaining how those concerns relate to the proposed action, they are beyond the

³⁷ Comment number EPA-HQ-OAR-2022_0389-0556-0001

scope of this action and thus require no further response. With respect to the comment relating to general air travel trends and COVID-19, we note that many aircraft, including commercial jets, do not operate on leaded aviation fuel and are not included in the description of the covered aircraft in the final notice for this action.

Some commenters express concern about the flight paths used to land and take off at nearby airports. The EPA responds that comments related to flight paths are outside the scope of this action and thus require no further response; the Agency neither proposed, requested comment on, nor is promulgating any requirement related to flight paths at airports in this action.

One commenter describes the formation of an organization to facilitate the successful transition to lead-free aviation fuels for piston aircraft by the end of 2030, provides information about the general aviation industry, describes the use of lead in aviation fuel and makes statements regarding the use and availability of unleaded fuels by the general aviation fleet. This commenter also makes statements about the yearly consumption of all avgas in the U.S. and compares that to automobile consumption and further states that since the 1970s, lead emissions from avgas have been reduced by half. In response, the EPA acknowledges these comments, and notes that because the commenter does not explain what if any aspect of the proposal should be finalized differently based on this information, the Agency does not consider these comments to be adverse to the action and thus they require no further response.

Another commenter makes various assertions about many aspects of airports (including operations at regional airports, regional air mobility, and the continued provision of leaded aviation fuel at General Aviation “Aviation Assets”), use of taxpayer money, and federal funding, and suggests that there is infrastructure readily available to support and deploy the delivery of unleaded aviation fuel. The EPA responds that these comments are outside the scope of this action, and thus require no further response.

In this section of the RTC, the EPA is focusing on comments related to past trends and future projections in general aviation activity. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, comments regarding the endangerment finding are addressed in Section 5, comments regarding economic and related considerations are addressed in Section 8.4, and comments regarding the aircraft industry are addressed in Section 8.5.

6.1.3. Fate and Transport of Lead from Covered Aircraft

Comment Number: EPA-HQ-OAR-2022-0389-0268-0014

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Lead air pollution emitted by airplanes is particularly harmful compared to other sources of lead air pollution. Recent research—cited by EPA in its Proposed Endangerment Finding— shows that the piston-engine aircraft exhaust has lead-containing particles that are smaller in size than exhaust particles from automobiles burning leaded fuel. [Footnote 89: See Jack D. Griffith, Electron Microscopic Characterization of Exhaust Particles Containing Lead Dibromide Beads Expelled from Aircraft Burning Leaded Gasoline, 11 Atmospheric Pollution Rsch. 1481 (2020), <https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0018>.] As a result of their smaller size, aircraft-generated particles are expected to remain in the air for longer and to more easily penetrate mucosal barriers in the lungs and gain easier access to epithelial cells. [Footnote 90: See id.] Lead from piston-engine aircraft is also particularly dangerous because of the possible sources of exposure. Not only do individuals who live or work near airports inhale airborne lead but lead particles may also fall to the ground or be deposited directly on the ground as a result of fuel dumping following pre-flight inspections

and can remain there for long periods of time or run off to surface water. [Footnote 91: See 73 Fed. Reg. at 67,011, 67,027 (discussing deposition of lead from air sources and the potential for deposited lead to contribute to human exposures for extended time periods); 87 Fed. Reg. at 62,766 (discussing fuel dumping).] People may be exposed by ingesting deposited lead in dusts, soil, food, and drinking water. Exposure through crop contamination—a pathway that EPA has recognized since at least the 1970s [Footnote 92: Air Quality Criteria at iv (“Secondary exposure [to airborne lead] may occur through ingestion of foods from crops contaminated by airborne lead”).]—may occur by aerial application of pesticides by piston-engine aircraft, which comprise roughly one-fifth of the fleet of aircraft used for aerial pesticide application. [Footnote 93: Industry Facts, Nat’l Agric. Aviation Ass’n, <https://www.agaviation.org/industryfacts> (last visited Jan. 13, 2023).]

Comment Number: EPA-HQ-OAR-2022_0389-0526-0001

Commenter Type: Private Citizen

Commenter: Mary Reed

Organization:

Excerpt Text:

As a concerned citizen, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "a“gas”,”the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on both physical and mental health. [FL TEXT REMOVED] Over five million people, including more than 360,000 children under the age of five, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Lead is being deposited in the surrounding waters and soils, adding to contamination. [FL TEXT REMOVED] The time has come to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Mary S. Reed Poultney, VT 05764

Comment Number: EPA-HQ-OAR-2022_0389-0670-0001

Commenter Type: Private Citizen

Commenter: Nancy McGill

Organization:

Excerpt Text:

I live near a recreational airport (Middleton Wisconsin) and am concerned about lead exposure from the frequent flyovers of my home. I am a gardener who spends a lot of time in my yard, so I am well aware of the many aircraft flying over my head.

Comment Number: EPA-HQ-OAR-2022_0389-0677-0001

Commenter Type: Private Citizen

Commenter: Hope Nelson

Organization:

Excerpt Text:

Lead NEVER leaves a body once it is ingested. Leaded fuel drops onto parks, school yards, football fields, etc, etc. Our kids end up playing in the stuff. What does anyone think happens in this situation? It's' not just the lead in the air we breathe, it's'also what falls to the ground that is problematic. And how much lead gets into our water?

Comment Number: EPA-HQ-OAR-2022_0389-0759-0001

Commenter Type: Private Citizen

Commenter: Andrea Thompson

Organization:

Excerpt Text:

Our soil near airports is being saturated to the point it's unsafe to grow a garden the airlines and oil industry need to remediate all the soil surrounding area pollution and waterways contaminated! Even playing in the backyard put the children there at risk through skin and littler one that eat dirt or suck their tiny thumbs!

Comment Number: EPA-HQ-OAR-2022-0389-0179-0002

Commenter Type: Local Government

Commenter:

Organization: Town of Middleton, Wisconsin

Excerpt Text:

In addition, we are requesting that the US EPA consider the attached and below information in making its endangerment finding determination as part of the EPA's docket. Please note, the attached file is too large for submission via the EPA preferred method for public comment on this matter. By separate email due to file size, we will also be submitting the Town of Middleton commissioned Trinity Consultants airborne lead study regarding the City of Middleton Municipal Airport-Morey Field (a/k/a "C9" and "Morey Airport")

Accordingly, attached please find USGS water quality stormwater data collection test results and preliminary information for testing commissioned by the Town of Middleton. The data shows aviation gas lead in surface water and private well drinking water near C29 in this densely populated area comprised of many residences, schools, playgrounds, parks, and athletic fields. Lead isotope fingerprint testing identified the source of that lead as C29 aviation gas. The C29 fuel farm owner, Morey Airplane Co., is recognizing its 80th year of operation this year.

The water test results are also publicly available on the USGS website. For example, the data for one of the test sites can be found here:

USGS website:

https://waterdata.usgs.gov/nwis/inventory/?site_no=05427943&agency_cd=USGS&

https://nwis.waterdata.usgs.gov/nwis/qwdata?site_no=05427943&agency_cd=USGS&format=inventory
Water Quality Samples for the Nation

USGS 05427943 PHEASANT BRANCH AT AIRPORT ROAD NEAR MIDDLETON, WI

Dane County, Wisconsin

Hydrologic Unit Code 07090001

Latitude 43°06'4", Longitude 89°32'1" AD83

Drainage area 9.70 square miles

Gage datum 912.47 feet above NAVD88

Comment Number: EPA-HQ-OAR-2022_0389-0671-0001

Commenter Type: Private Citizen

Commenter: Myrna Solganick

Organization:

Excerpt Text:

I have lived in Middleton since 1980, and am concerned that there is now lead in our drinking water. As a result, I feel it is prudent for me to use only bottled water in my home. This is not acceptable. The City and Town of Middleton do not need increased airport service. There is already a large airport less than 10 miles away. Clean air and clean water should be a priority for everyone. Lead has been linked to cardiovascular disease, hypertension, decreased kidney function, and kidney disease. For children, lead exposure can lead to damage to the brain and nervous system, slowed growth and development; speech, hearing and behavioral problems. Preventing these disorders should be more important to the community than increase air service!

Comment Number: EPA-HQ-OAR-2022-0389-0238-0017

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The Town of Middleton also recently commissioned a government water quality sampling study of areas near Morey Airport due to concerns about potential drinking water contamination, as all residential areas in the Town rely on the use of private wells for drinking water. Two of six residential private drinking water wells sampled in this study tested positive for the isotopic fingerprint for Morey Airport leaded avgas.[Footnote 59: U.S. Geological Survey Presentation, Town of Middleton Board Meeting Agenda Item #5, Concentrations of Perchlorate, Metals, GRO, Hydrocarbons, and BTEX Compounds in Surface Water, Groundwater, and Soil Near Morey Airport (Dec. 19, 2022), available at <https://middleton.civicweb.net/Portal/MeetingInformation.aspx?Org=Cal&Id=467>.] In 2022, the City of Middleton adopted an Airport Master Plan for significant expansion of the airport, amplifying concerns about potential contamination.[Footnote 60: See C29 Master Plan, supra note 13.]

Comment Number: EPA-HQ-OAR-2022_0389-0489-0001

Commenter Type: Private Citizen

Commenter: Mary Hollen

Organization:

Excerpt Text:

I am in favor of

<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.regulations.gov%2Fdocument%2FEPA-HQ-OAR-2022-0389-0001&data=05%7C01%7Coped%40seattletimes.com%7Cff994a13b2e34ab8a5fa08dadd5a7c2a%7Cfc2b8476b7f0473d82fbe0a89fd99855%7C0%7C1%7C638065677992652958%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=4r10LPqS%2B1a%2Fc6hW7%2F7oOvhiLFhZSKd6g1tHD4vpwUM%3D&reserved=0>

identifying lead based aviation fuels as hazardous to my health. I am a severe asthmatic living beneath the flight path of small propeller planes flying from Boeing, Renton, and Crest to destinations in the San Juan Islands. My community is harmed by the lead, as is the salmon community growing in eelgrass beds around this part of the Salish sea. The lead is harming the salmon that comprise an important part of the diets of Resident Orca Whales. I support a prohibition against fuels containing lead for small aircraft in this region.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0004

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

I am sure you have had many people talk to you about the damage that leaded fuel causes, and it is distributed over a community, it's our farms, our fields, our schools, our parks, anybody out doing recreation but in my case, in particular, and in the case of those of us that live in the banks manning area of Washington County, Oregon, which is just west of the Hillsborough Airport, this is our farmland, we can't be out there even in the summertime without being bombarded by very vigorous multi tract, all at once, there will be two or three or four airplanes in the sky using leaded fuel over our organic orchards. So, I am asking please that leaded fuel be taken away from the capacity of the aviation industry to pollute and contaminate our soils because that's not just the soil and the air that's being contaminated, it's our children and we all know very well about the very serious nature of lead pollution.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0002

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

We have organic orchards out here, I have an organic orchard, I have neighbors that have farms and organic farms of all kinds including for milk, and for meat and for vegetables. We are very concerned.

Comment Number: EPA-HQ-OAR-2022_0389-0377-0001

Commenter Type: Private Citizen

Commenter: Patricia Popple

Organization:

Excerpt Text:

[FL TEXT REMOVED] It is even more concerning that airplanes are flown directly above my house and to the north and south. Lead poisoning could easily affect my pets as well as my garden produce and flowers. And Chippewa Springs or Premium Waters is nearby, so industries bottling water could easily be impacted as well.

Comment Number: EPA-HQ-OAR-2022_0389-0376-0001

Commenter Type: Private Citizen

Commenter: Liz Temple

Organization:

Excerpt Text:

[FL TEXT REMOVED] These airports are in residential neighborhoods that also may have private wells. Other times, the runoff from the air port runways contaminates soils in the vicinities. Lead will reach the groundwater and end up in the wells, contaminating drinking water for residents. We all know the price of brownfield cleanups! Please find lead free aviation fuels and require them to be used.

Comment Number: EPA-HQ-OAR-2022_0389-0324-0004

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Another study conducted by the EPA found that 47% of the lead emitted by these piston engines occur during takeoff and landing, which tends to be over residential areas. By emitting this lead, the people living in the areas surrounding the airport are directly exposed to alkyl lead and lead bromide, which are toxic and unsafe for human ingestion. Not only are people at risk of being exposed to lead, but the local aquatic ecosystems, agricultural products, and the overall environment are at risk of being exposed to unsafe levels of lead. Alkyl lead in particular has been found to be a toxic pollutant found to be accumulating in the tissues of aquatic organisms, putting people who drink the same water or eat the aquatic animals at risk of ingesting lead. It is important to address this issue because there can be serious side effects of lead poisoning.

Comment Number: EPA-HQ-OAR-2022_0389-0373-0001

Commenter Type: Private Citizen

Commenter: Marina Atlas

Organization:

Excerpt Text:

[FL TEXT REMOVED] Lead is a potent neurotoxin with the most devastating effects observable in developing brains. The US EPA and States have known for years and advised women of reproductive age and families with young children that there is NO safe level of lead exposure. [FL TEXT REMOVED] These fine particulates further settle on surfaces from door handles to gardens and on soil thus multiplying the potential impacts of toxic lead pollution from air deposition. Furthermore, children not only breathe significantly more air per pound of body weight but are more likely to be exposed through hand to mouth behaviors as well as sometimes diet when foods cannot be grown free of toxic lead exposure. Banning avgas and closing this loophole cannot wait. [FL TEXT REMOVED] Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports and continues to poison everyone under flight paths. [FL TEXT REMOVED] Thank you for your consideration of this urgent matter and overdue problem. Sincerely, Marina Atlas Belmont, MA 02478

Comment Number: EPA-HQ-OAR-2022_0389-0441-0003

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

Every day that leaded gasoline is used in piston-engine aircraft, Americans across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0530-0003

Commenter Type: Private Citizen

Commenter: Anne Wilson
Organization:

Excerpt Text:

Lead does not dissipate. It stays where it lands - on the ground, in the water, in our lungs. Once lead dust lands on Earth, it is taken up by plants and animals. It is nearly impossible to mitigate.

Comment Number: EPA-HQ-OAR-2022_0389-0530-0008

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

The CDC says, "When leaded aviation fuel is burned in an aircraft's engine, about 95% of the lead is expelled from the combustion chamber and elemental/inorganic lead dust; Aircraft exhaust is well-recognized as a major contributor of lead pollution in the soil and air. The EPA recently estimated that 16 million people live within 1 kilometer of the nearly 20,000 airport facilities in this county and that 3 million children attend school located within the same one kilometer radius." "These numbers are from 2008. Avgas usage has only increased since then. While working around leaded avgas is a serious health risk, only a small bit of that risk is born by the beneficiaries of its use. With 95% of the lead emitted in exhaust, the greatest exposure is spread to all life on the ground, while the economic benefits accrue to the industry.

Comment Number: EPA-HQ-OAR-2022_0389-0533-0004

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

Lead does not dissipate. It stays where it lands - on the ground, in the water, in our lungs. Once lead dust lands on Earth, it is taken up by plants and animals. It is nearly impossible to mitigate.

Comment Number: EPA-HQ-OAR-2022_0389-0533-0009

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

The CDC says, "When leaded aviation fuel is burned in an aircraft's engine, about 95% of the lead is expelled from the combustion chamber and elemental/inorganic lead dust; Aircraft exhaust is well-recognized as a major contributor of lead pollution in the soil and air.

Comment Number: EPA-HQ-OAR-2022_0389-0611-0003

Commenter Type: Private Citizen

Commenter: Pamela Holley-Wilcox

Organization:

Excerpt Text:

Every day that leaded gasoline is used in piston-engine aircraft, communities like mine across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0643-0001

Commenter Type: Private Citizen

Commenter: Hasibe Caballero-Gomez

Organization:

Excerpt Text:

There is no safe level of lead exposure. Even small amounts of lead can cause permanent health effects, and lead is a highly persistent pollutant. That means as long as it's dispersed into our atmosphere it will remain in our soils for centuries unless the soil is remediated, which is unlikely due to high costs. Therefore, for the safety and well-being of the public, and in order to avoid the further disproportionate damage to non-white children, leaded fuel for aircraft engines should be banned.

Comment Number: EPA-HQ-OAR-2022_0389-0751-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is a persistent, cumulative toxin that never goes away; it stays in the environment and is difficult or impossible to mitigate. There is no safe level of exposure, and lead exposure has been associated with a multitude of health problems. Yet, decades after it was banned in products and automobile fuel, private industry is still allowed to poison people living around airports. Children living near airports or attending school under a flight path may be afflicted with health issues for the rest of their lives. Pilots and others who need to service and clean the lead out of plane engines may not only expose themselves but also bring home lead on their clothing to their families and expose them. The Reid-Hillview study showed that children living near the airport had lead exposure blood levels at the same level- and sometimes exceeding- children exposed to lead in Flint, Michigan. This is a health EMERGENCY.

Comment Number: EPA-HQ-OAR-2022_0389-0756-0002

Commenter Type: Private Citizen

Commenter: Cynthia Allison

Organization:

Excerpt Text:

The hundreds of small planes that fly low around our neighborhoods every day, still use leaded fuel. EPA's own estimates are that 70% of airborne lead in the US is from leaded avgas. The aircraft engine exhausts most of this lead as lead dust, which lands on the ground and seeps into soils, sticks wherever it lands, and is breathed in.

Comment Number: EPA-HQ-OAR-2022-0389-0159-0001

Commenter Type: Private Citizen

Commenter: B. J. Wilson

Organization:

Excerpt Text:

Lead is a highly toxic substance that poses a significant threat to the health of both humans and to the environment at large. As the Environmental Protection Agency notes in the extensive findings presented in this proposed regulation, airborne lead contamination from covered aircraft that use leaded fuel. The EPA notes in section II (a) (1) of the second part of this proposal that piston engine aircraft utilize a leaded fuel called avgas as their primary fuel. Lead is a particularly dangerous substance not only because it is toxic, but because it is persistent. Soil, water, or any surface contaminated by lead can remain contaminated for decades. As the EPA notes in section II of this report, airborne lead pollution, like that produced by leaded aircraft fuel, is particularly dangerous because not only does it contaminate the air, but airborne lead can be deposited in the soil and water, furthering lead pollution of the environment. Airborne lead pollution is by nature a highly distributable pollutant and as the EPA notes in the report can deposit inside buildings such as households near sites of contamination, in this case, airports.

Comment Number: EPA-HQ-OAR-2022-0389-0216-0006

Commenter Type: Tribal Government

Commenter:

Organization: Fond du Lac Band of Lake Superior Chippewa

Excerpt Text:

Lead is emitted into the air and can be transported and deposited into the environment through deposition. It can persist in the environment it deposits into, can be transported through surface water, deposited into water bodies or into soil, or also be resuspended into the air.[Footnote 9: EPA (2013) ISA for Lead. Section 6.2. “Fate and Transport of Pb in Ecosystems.” p. 6–62. EPA, Washington, DC, EPA/600/R–10/075F, 2013.] These depositions can create pathways for exposure for humans and the environment through sediments, soil, surface water, dust, fish/wildlife, and vegetation. Breathing in contaminated dust, ambient air, or consuming contaminated food, water, or other materials can cause detrimental human health impacts due to increased blood lead levels.[Footnote 10: EPA (2013) ISA for Lead. Section 3.1.1. “Pathways for Pb Exposure.” p. 3–1. EPA, Washington, DC, EPA/600/R–10/075F, 2013] Lead is a known bioaccumulator, and is considered a PBT (Persistent, Bioaccumulative, and Toxic) pollutant by the EPA.[Footnote 11: EPA (2002) Persistent, Bioaccumulative, and Toxic Pollutants (PBT) Program. PBT National Action Plan for Alkyl- Pb. Washington, DC. June. 2002] This bioaccumulation is particularly relevant to the Fond du Lac Band, due to treaty hunting, fishing, and gathering rights retained by the tribes. Lead has been known to bioaccumulate in tissues of aquatic organisms, such as fish, which is an important source of food for tribal members.[Footnote 12: EPA (2013) ISA for Lead. Section 6.4.2. “Biogeochemistry and Chemical Effects of Pb in Freshwater and Saltwater Systems.” p. 6–147. EPA, Washington, DC, EPA/600/R–10/075F, 2013] Fish consumption advisories already occur within Fond du Lac’s ceded territories due to mercury bioaccumulation, and further preventing other toxics availability is of extreme importance for the Band as we work to preserve and restore our natural resources for current and future generations.

Agriculture may also be impacted by lead emissions, as piston-engine aircraft are typically the vessels used in agricultural activities such as fertilizing, seeding, and applying pesticide. These aircraft typically employ low-flying techniques to minimize drift, potentially leading to direct deposition of lead emissions onto crops, which may also make its way into livestock that may consume impacted plants/crops/soil. There is also the potential of lead deposition into areas of local residences from agricultural activity; an example of this would be spraying for prevention of invasive species on the landscape, such as the spongy moth, *Lymantria dispar*, which has occurred in the past near the Fond du Lac Reservation.[Footnote 13: EPA (1986) AQC for Lead. Section 7.2.2.2. EPA, Washington, DC, EPA–600/8–83/028aF–dF (NTIS PB87142386), 1986.][Footnote 14: Minnesota Department of Agriculture. “Second Gypsy Moth

Treatment in Duluth, Cloquet Scheduled for Wednesday, June 29". MDA, June 28th 2022] Acting on leaded fuel would work to reduce existing lead exposures from the agricultural industry and the products that communities rely on for sustenance.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

I appreciate the opportunity to comment on the Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. (Docket ID No. EPA-HQ-OAR-2022-0389) One would think that the 1970 Clean Air Act would have been more inclusive of aircraft since this EPA estimates general aviation aircraft have dumped 113,000 tons (226 million pounds) of lead emissions into our environment since 1930.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0004

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

6) Lead particulate compounds (referred to herein as lead particulates) in piston-engine aircraft emissions are denser than air and given the fair- weather, low-windspeed, and relatively low altitude of lead particulate contaminant emissions by these aircraft, a significant fraction of piston- engine aircraft lead particulate emissions will be dispersed into the local ground-level environment – as indicated by piston-engine aircraft emission simulations that have been done for the Town of Middleton, Wisconsin using EPA’s own widely-used and widely-accepted AERMOD dispersion modeling software that have been done for the Town of Middleton, Wisconsin (see citation below). Note that this AERMOD modeling was accompanied by field lead particulate air sampling that validated the modeling report results and confirmed the presence at ground level of inhalable airborne lead particulates from piston-engine aircraft.

Comment Number: EPA-HQ-OAR-2022-0389-0233-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

The rule is strongly supported by decades of scientific studies, past policy outcomes associated with decreased lead burden in populations, and the Biden administration's final lead strategy (CFR, 2022). The draft published analysis for this proposed rule was developed from a variety of connected studies and technical methodologies that follow the classic source to exposure to health effect continuum (Teegarden JG, et al. 2016).

This comprehensive analysis by EPA documents a case for public health endangerment based on the potential for NAAQS violations near general aviation airports. The lead NAAQS is a level of airborne

lead that is set to be protective against a 2-point IQ loss. EPA's analysis certainly provides strong evidence that airborne lead levels are not protective of the lead NAAQS IQ decrement, but we would like to make clear that since there has been no safe exposure level of lead found, this analysis albeit thorough, analytically sound, and well documented is not based on fully health protective assumptions.

Moreover, the lead NAAQS are not a good measure of whether leaded avgas endangers public health since the standard is quite outdated (last updated in 2008) and is not health protective, permitting significant IQ loss. EPA missed its October 2021 deadline for reviewing and revising the lead NAAQS. Even if areas around an airport are compliant with the lead NAAQS, public health and particularly children's health could still be endangered. That said, the fact that the lead NAAQS are potentially exceeded shows how great a public concern leaded avgas is.

Monitoring studies of general aviation airports resulted in two demonstrated exceedances of the NAAQS using particulate monitoring. The monitoring studies employed a filter-based particulate capture methodology, which therefore does not capture gas-phase organically substituted lead. As a result, potential exceedances of the lead NAAQS are likely to be occurring at more than the reported number of small airports tested.

Lead from piston-engine aircraft is emitted in both gas and particle phase, and so health protective monitoring would include both gas phase and particle collection methods, and air dispersion modeling would need to be set up such that deposition algorithms as well as gas phase transport was appropriately parameterized. Therefore, potential NAAQS violations at small airports is well supported based on the particulate-based ambient air monitoring since this method did not capture all potential lead species.

Due to the underpredictions of potential NAAQS violations at small airports demonstrated by ambient air monitoring, EPA set up an air dispersion modeling study of 13,000 airports. Modeled predictions of lead concentrations, annual averages, and 3-month rolling averages for lead NAAQS compliance demonstration were estimated based on a sensitivity analysis. Locations and activity levels were varied to test potential concentration and location maxima.

Lead is also a persistent bioaccumulative toxicant, and risks from historic lead deposition to soil and surface waters, with resuspension from soils as discussed by EPA from Heiken et al. 2014, has been and is an ongoing source of potential exposures and harm. Source apportionment of soil lead from deposition and resuspension is technically challenging due to the dynamic processes and treatment of topsoil, although it is unclear to what extent EPA accounted for resuspension in their modeled estimates for airborne concentrations of lead. This process of deposition and resuspension is also an important contributor to future potential harm. Therefore, it is important to assess both lead resuspended, emitted, and entrained in the air as well as lead that can enter terrestrial and surface water environments and the food chain.

One parameter that was not well defined or explained in the proposed rule and the supporting information were the deposition parameters for lead. Deposition parameters that would be particularly important in this type of analysis are gas/particle fraction and the size range of the particles. In health protective air dispersion and deposition analyses, these deposition parameters would be maximized to a reasonable extent such that maximum air concentrations could be resolved as well as maximum potential deposition. In this case, the subsequent soil and surface water contamination and uptake into the food chain could be properly investigated.

Project TENDR supports the finding of endangerment of lead in aviation fuel, since potential lead NAAQS exceedances and concerning risk from multi-media exposures resulted from the analysis even without all possible worst-case scenarios developed. The finding of a minimum use level of 0.1 tons per year could be lower dependent on the relative concentrations of gas phase lead versus particulate phase lead emissions. This is reaffirmed by our earlier assertion that an argument based on lead NAAQS

exceedance is not fully protective of neurodevelopmental detriment since there is no safe level of lead exposure.

Comment Number: EPA-HQ-OAR-2022_0389-0603-0001

Commenter Type: Private Citizen

Commenter: Mark Grassman

Organization:

Excerpt Text:

I've lived in Indiana all my life. There are lots of farms in this great State; Indiana doesn't just grow corn and soybeans, it is a leading producer of popcorn. Our farms use lots of chemicals on these crops. They spray pesticides from planes to control weeds and bugs. These chemicals possibly containing agent orange can't be good for pollinators like bees. Furthermore, these planes run on lead-based aviation gasoline! I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022-0389-0238-0015

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The EPA itself has repeatedly recognized the significant contribution of avgas to harmful levels of lead air pollution. In its 2020 study of airborne lead concentrations at U.S. airports, the EPA concluded that general aviation airport operations increase lead air concentrations, particularly in downwind areas.[Footnote 55: See U.S. EPA, Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports 3 (Feb. 2020), available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>. The EPA also acknowledged that, by considering only airborne lead, its model was scoped conservatively. To reflect the full range of exposures to leaded avgas among populations near airports, the analysis would need to account for potential exposures to emitted lead particles that settle in nearby water and soil. Id. at 5.]

Comment Number: EPA-HQ-OAR-2022-0389-0158-0002

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

The EPA also recognizes that, not only are these pollutants airbourne, but they can have impacts on soil, food, and aquatic environments which further degrades our environment, impacts our diets, and damages our health.

Response to Comments Regarding the Fate and Transport of Lead from Covered Aircraft

Many commenters raise concerns that lead emitted by piston-engine aircraft can have impacts in the local environment or on human health, with some commenters expressing concerns about the relatively small

size of aircraft-generated particles and others raising concerns about possible sources of exposure to lead from piston-engine aircraft. Commenters express concerns about various types of aircraft-related lead deposition, such as to soil and aquatic ecosystems, groundwater, farms, orchards, parks, gardens, and other materials, and some commenters raise concerns that such deposition can create pathways for exposure for humans, animals, or the environment. Some of these comments point to potential exposure through sediments, soil, surface water, dust, fish/wildlife, and vegetation, while others point to potential ingestion of lead deposited in dusts, soil, food, and drinking water, or through ingestion of crops that have been contaminated through use of piston-engine aircraft in agriculture, or to runoff from runways leading to water contamination. One commenter (the Fond du Lac Band of Lake Superior Chippewa) expresses concern about bioaccumulation of lead in aquatic organisms, such as fish, asserting that these are an important source of food for tribal members, and further stating that such bioaccumulation is particularly relevant to them due to treaty hunting, fishing, and gathering rights retained by the tribes. The EPA acknowledges these comments and notes that Section II.A.4 of the final notice for this action contains a summary of the chemical transformation that piston-engine aircraft lead emissions are anticipated to undergo in the atmosphere and describes what is known about the deposition of piston-engine aircraft lead, and potential impacts on soil, food, and aquatic environments. The EPA discusses the transport and distribution of lead emitted from covered aircraft, the small size of lead-bearing particles emitted by piston engines, potential pathways for exposure, and the persistence of lead in the final notice for this action, including in Sections II.A.4, IV.A, V.B and V.D. To the extent these comments cite or provide information that is different from or goes beyond what is addressed in the proposed or final action, the EPA notes that data, information, and analyses that support the final cause or contribute finding is described in Section V of the final notice. After reviewing these comments, the EPA concludes that these comments do not undermine the support for the cause or contribute finding. Insofar as these comments indicate that the additional information they provide could also be considered as support for finalizing the findings, the EPA responds that because the data, information, and analyses summarized in Section V provide ample support to finalize the cause or contribute finding, the EPA need not evaluate whether other information could provide additional support for finalizing the cause or contribute finding. Further, even if the EPA were to agree with these commenters that this information could offer additional support for the cause or contribute finding, considering the information would not change the Administrator's final decision on the cause or contribute inquiry, as there is already sufficient information to support an affirmative finding based on the information described in Section V of the final notice.

Some of these commenters address aspects of methodologies that the EPA used in modeling or monitoring lead emissions. One commenter states that the monitoring studies of general aviation airports employed a filter-based particulate capture methodology, which does not capture gas-phase organically substituted lead, concluding that that potential exceedances of the lead NAAQS are likely to be occurring at more than the reported number of small airports tested. The EPA responds that even if the commenter is correct, this point does not undermine the support discussed in Section V of the final notice for the cause or contribute finding. If anything, it would simply mean that there may be additional potential exceedances of the NAAQS beyond those identified in the EPA's monitoring study. We respond to this comment further in Section 8.2.1.

With regard to the EPA's modeling of lead emissions by covered aircraft, one comment states that the EPA's modeling is scoped conservatively, and that in order to reflect the full range of exposures to leaded avgas among populations near airports, the analysis would need to account for potential exposures to emitted lead particles that settle in nearby water and soil. Additionally, one commenter states that it is unclear to what extent EPA accounted for resuspension in their modeled estimates for airborne concentrations of lead. This comment asserts that this process of deposition and resuspension is also an important contributor to future potential harm and that it is therefore important to assess both lead resuspended, emitted, and entrained in the air as well as lead that can enter terrestrial and surface water environments and the food chain. In response, the EPA notes that it recognizes the potential transport and fate of lead emitted from covered aircraft engines as described in Section II of the final notice for this

action, although we did not attempt to quantify the potential concentrations of lead deposited to nearby water and soil near airports across the U.S. as part of this study. Similarly, the study did not incorporate estimates of lead in resuspended soil that originated in the exhaust from covered aircraft engines. This approach was reasonable for this study because the study estimated model-extrapolated air lead concentrations at an airport's "maximum impact area," which is the assigned area at the end of the runway where pilots are required to conduct safety checks with engines running just prior to takeoff, and at areas downwind of this maximum impact area. The maximum impact area is expected to have the highest concentration of lead in air because of engine exhaust and not resuspended lead particles. As in the previous paragraph, the EPA further responds that it does not believe that these comments undermine the support described in Section V of the final notice for the cause or contribute finding. Even if the comments were correct, such resuspension would simply mean that there may be lead that becomes airborne in addition to that identified through the EPA's modeling.

The same commenter asserts that the supporting information for deposition parameters used to estimate deposition of lead emissions from covered aircraft engines was not well explained in the proposal or the supporting information. This comment further asserts that deposition parameters that would be particularly important in this type of analysis are gas/particle fraction and the size range of the particles, and that in health protective air dispersion and deposition analyses, these deposition parameters would be maximized to a reasonable extent such that maximum air concentrations could be resolved as well as maximum potential deposition. It is unclear what analyses and parameters the commenter is referring to. The design of EPA's "Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports" did not account for lead deposition, though the EPA notes that it did model the deposition rate for aircraft lead emissions at one airport in a temperate climate in California with dry summer months. In this location, the average lead deposition rate from aircraft emissions of lead was 0.057 milligrams per square meter per year. The EPA further responds that it did include a Memorandum to the docket about this deposition study for this action to which we referred in the proposal titled "Deposition of Lead Emitted by Piston-engine Aircraft."³⁸ The comment does not address the information provided in this Memorandum and does not explain what if any aspect of the proposal should be finalized differently if the Agency would have used the approach to deposition parameters that the commenter recommend. Rather, the commenter indicates that it supports the finding "since potential lead NAAQS exceedances and concerning risk from multi-media exposures resulted from the analysis even without all possible worst-case scenarios developed."³⁹ Accordingly, the EPA considers this comment to not be adverse to this action, and thus it requires no further response.

One commenter submitted as part of their comments the preliminary results of a water quality data collection test of private drinking water wells near an airport in Middleton, WI, among other data, including analysis of surface water, water during one runoff event, soil, and shallow groundwater (also known as porewater) and asks that the EPA consider this information in making the final findings.⁴⁰ The comment states that this data shows aviation gas lead in surface water and private well drinking water near a local airport and that lead isotope fingerprint testing identified the source of that lead as aviation gas from that airport. The EPA thanks the commenter for providing the results of this preliminary analysis. Based on the EPA's initial review of this information, it appears that the primary initial finding it presents was that of the six residential private drinking water wells that were sampled, the lead in two

³⁸ Memorandum to Docket EPA-HQ-OAR-2022-0389. Deposition of Lead Emitted by Piston-engine Aircraft. June 15, 2022. Docket ID EPA-HQ-2022-0389.

³⁹ Comment EPA-HQ-OAR-2022-0389-0233.

⁴⁰ Docket ID for this submittal is EPA-HQ-2022-0389-0179_attachment_2.pdf. The following disclaimer is noted on the cover page of this submission: "This information is preliminary or provisional and is subject to revision. It is being provided to meet the need for timely best science. The information has not received final approval by the U.S. Geological Survey (USGS) and is provided on the condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from the authorized or unauthorized use of the information."

samples matched the lead isotope signature⁴¹ for the lead present in the avgas sampled at the nearby airfield, although concentrations of lead in the water were not above drinking water action levels. However, the data submitted was not sufficient for a thorough review by the EPA, and the Agency is therefore not relying on this information in finalizing the findings. As described earlier in this section of the RTC, the basis for the Administrator’s cause or contribute finding is summarized in Section V of the final notice for this action, and that information provides ample support to finalize the cause or contribute finding. The EPA further notes that it describes the potential for these pathways to influence lead concentrations in environmental media in Section II.A.4 of the final notice for this action and in associated memos to the docket.

In this response, the EPA is focusing on addressing comments related to fate and transport of lead from covered aircraft. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses to comments related to the health and welfare effect of lead, please refer to Section 5 of this RTC document. For further responses to comments regarding aircraft lead contributions to the inventory of lead released to air and concentrations of lead in air, see Section 6.1.1. Comments related to the lead NAAQS and lead monitoring are responded to in Section 8.2.1. We respond to comments requesting education and outreach in Section 8.2.2.

6.2. Comments Expressing Opposition to the Cause or Contribute Finding

6.2.1 Comments Asserting that Covered Aircraft Emit a Small Amount of Lead

Comment Number: EPA-HQ-OAR-2022-0389-0206-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

Lead emissions are 425 times less today than when the Clean Air Act came into being. Since the passage of the Clean Air Act (CAA) by Congress in 1970, lead emissions in the United States have been reduced by a remarkable 99+%, or over 200,000 tons/year. The efforts of EPA, along with those of refiners and automobile engine manufactures are to be commended. In roughly 2 generations, all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than ¼ of 1% of the lead emissions of the 70’s. It should be recognized that the biggest endangerment that the public has ever faced from lead emissions has already been eliminated, through the regulation of transportation fuel and the phase out of lead from automobile gasoline. For our current EPA administrator to “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” is a high bar to clear when viewed in context of past achievements.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

⁴¹ The EPA notes that a lead isotope signature is the ratio of the stable isotopes of lead that are found in a source material (e.g., lead ore deposits, environmental media, such as air samples, and products containing lead, such as avgas).

Excerpt Text:

Absent the lead from gasoline, it only stands to reason that aircraft engine emissions represent a high percentage of today's lead emissions. The question is can it be managed, or must it be eliminated from aviation fuel at any cost.

Comment Number: EPA-HQ-OAR-2022_0389-0641-0001

Commenter Type: Private Citizen

Commenter: Dave Embry

Organization:

Excerpt Text:

We certainly don't need EPA diving into this. The amount of bad emissions put out by the current aircraft engines are almost nothing compared to what they were from automobile engines back in the 70's when this all started and the small amount that is emitted can be controlled through the suggestions by the CSA.org. Lead emissions are 425 times less today than when the Clean Air Act came into being. Since the passage of the Clean Air Act (CAA) by Congress in 1970, lead emissions in the United States have been reduced by a remarkable 99+%, or over 200,000 tons/year. The efforts of EPA, along Comments of the Coalition for Sustainable Aviation with those of refiners and automobile engine manufactures are to be commended. In roughly 2 generations, all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than 1/4 of 1% of the lead emissions of the 70's. It should be recognized that the biggest endangerment that the public has ever faced from lead emissions has already been eliminated, through the regulation of transportation fuel and the phase out of lead from automobile gasoline. For our current EPA administrator to "find that lead air pollution may reasonably be anticipated to endanger the public health and welfare" is a high bar to clear when viewed in context of past achievements.

Aviation fuel was specifically excluded from regulation under the Clean Air Act. During this same period of time (1973 through the early 90's), there were significant changes made to automobiles that allowed them to run without leaded fuel. No similar modifications were made to aircraft engines. In fact, today's aircraft engines are essentially the same aircraft engines of the 1930's and 1940's, which is why they depend upon the higher octane fuel, achieved through the use of Tetra Ethyl Lead (TEL), for safe and reliable operation. It should also be noted that the dramatic reduction in lead emissions (by over 99%) was accomplished without making regulatory changes to either aviation fuel or aircraft.

Comment Number: EPA-HQ-OAR-2022-0389-0254-0001

Commenter Type: Private Citizen

Commenter: Robert James

Organization:

Excerpt Text:

This is my strong objection to the EPA overreaching it's authority, without any data or scientific information to back up their reasoning with the Avgas of today!

Please stand down!

FAA, please show some spine and stand up! Protect your rightful authority, or lose it!

Under the "Proposed Rule", the EPA claims authority under section 231(a)(2)(A) of the Clean Air Act to both "find that lead air pollution may reasonably be anticipated to endanger the public health and welfare" and additionally "to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonable be anticipated to endanger public health and welfare".

The fact is that leaded fuels used in Avgas today is substantially lower in harmful emissions now than what many of us remember in older automobiles and all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than ¼ of 1% of the lead emissions of the 70's.

In Conclusion; this proposal affects Pilots and Aviation fuel bases worldwide.

It is documented, and should be recognized that the biggest endangerment that the public has ever faced from lead emissions has already been eliminated.

For the current EPA Administrator to “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” is irresponsible and false.

Comment Number: EPA-HQ-OAR-2022_0389-0665-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed. Any disruption to General Aviation has an immediate and lasting impact to Commercial Aviation. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia.

Comment Number: EPA-HQ-OAR-2022_0389-0637-0001

Commenter Type: Private Citizen

Commenter: Anthony Mccutchan

Organization:

Excerpt Text:

The fact is that leaded fuels used in Avgas today is substantially lower in harmful emissions now than what many of us remember in older automobiles and all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than 1/4 of 1% of the lead emissions of the 70's. The EPA has much bigger fish to fry than GA

Comment Number: EPA-HQ-OAR-2022_0389-0689-0001

Commenter Type: Private Citizen

Commenter: Luke Bruns

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0640-0001

Commenter Type: Private Citizen

Commenter: Creighton King

Organization:

Excerpt Text:

It's never a good idea to add another government agency to oversee anything. The very tiny amount to leaded fuel emissions from aircraft are less than 1/4 of 1% of the emissions from cars in the 1970's..

Comment Number: EPA-HQ-OAR-2022_0389-0663-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Kay Frizzell

Organization:

Excerpt Text:

Who does not wish to have a clean and safe environment. But I urge you to please consider how little our piston engines actually contribute to the amount of lead that is contained in the environment. There are common sense remedies that should be considered before an entire industry be shut down by unneeded and severe regulation.

Comment Number: EPA-HQ-OAR-2022_0389-0738-0001

Commenter Type: Private Citizen

Commenter: William Kyle

Organization:

Excerpt Text:

The possibility that Lead Emissions from piston engine aircraft cause air pollution is ludicrous. The amount of hours flown by the entire fleet do not amount to enough lead being used to affect air pollution one way or another. The size of the fleet is shrinking daily and will burn less fuel every year. I urge you to not issue this finding as the sample size is too small

Response to Comments Asserting that Covered Aircraft Emit a Small Amount of Lead

Some commenters assert that lead emissions today are 425 times less than lead emissions of the 1970s or that the emissions of lead from aircraft are less than one quarter of one percent of the emissions from cars in the 1970s. Some commenters also state that it only stands to reason that covered aircraft engine

emissions of lead represent a high percentage of current lead emissions because lead is no longer being emitted by motor vehicles. At least one additional commenter states that given the number of hours flown by covered aircraft, they do not contribute enough lead to affect air pollution. The EPA responds to these comments in Section V.C of the final notice for this action.

Additionally, some commenters state that leaded avgas of today accounts for approximately 470 tons/year of lead emissions, or less than ¼ of 1% of the lead emissions of the 70s, and at least one goes on to state that for the current EPA Administrator to “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” is irresponsible and false. Some comments argue that the biggest endangerment, or any realistic endangerment, to the public from lead emissions has already been addressed or that there is a high bar to clear to making an endangerment finding, when viewed in context of past achievements. To the extent that these comments contend that reductions in overall lead emissions from historical levels mean that the EPA should not finalize the cause or contribute finding, the EPA disagrees for the reasons explained in Section V.C of the final notice for this action, including its disagreement that the alleged efficacy of other “Executive Branch programs” in addressing an air pollution problem is a valid reason for declining to make final findings.⁴² With respect to the comment asserting that finding “that lead air pollution may reasonably be anticipated to endanger the public health and welfare” is irresponsible and false, the EPA responds that to the extent the comment is arguing that the lead air pollution doesn’t endanger public health or welfare, we disagree for the reasons explained in Section IV of the final notice. To the extent the comment argues that lead emissions from engines in covered aircraft do not contribute to the lead air pollution, we disagree for the reasons described in Section V of the final notice.

At least one commenter asserts that the size of the fleet is shrinking daily and will burn less fuel every year and urges the EPA to not issue this finding as the sample size is too small. The EPA responds that it is not clear what the comment means by asserting that the sample size is too small and that the comment has not provided any support for this assertion. With respect to the comment regarding future fleet size and fuel consumption, the EPA responds that for the reasons described in Section V.D of the final notice for this action, the Administrator is concerned about the likelihood for lead emissions from engines in covered aircraft to continue to be an important source of air-related lead in the environment in the future, if uncontrolled. The comment’s unsupported assertions do not address these concerns.

Moreover, in section 231, Congress directed EPA to make a “cause or contribute” finding simpliciter and did not require the agency to find a significant level of contribution as a prerequisite to regulation. This is particularly relevant given that in other sections of the Act, Congress did require the agency to determine “significant” contribution. See, e.g., CAA section 213(a)(1), (2), (4). Congress’s omission of the word “significant” in section 231 is likely intentional and suggests that it expected EPA to determine contribution, regardless of whether the contributing sources were a significant part of the problem. In any event, as EPA explains in section V.B of the final notice, there is no question that the contributions from covered aircraft constitute the majority of lead emissions to air and that they contribute to lead concentrations in nonattainment areas.

In this section of the RTC, the EPA is focusing on comments related to assertions that covered aircraft emit a small amount of lead. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, the Agency responds to comments regarding its legal authority in Section III.D of the final notice for this action and Section 7 of this RTC document; to comments regarding the endangerment finding in Section 5 of this RTC document. The Agency responds to comments about the aircraft industry in Section 8.5 of this RTC document.

⁴² See *Massachusetts v. E.P.A.*, 549 U.S. 497, 533 (2007).

6.2.2 Comments Asserting that Lead Concentrations in Air Cause No Harm and Exceed the Lead NAAQS at Only a Few Airports

Comment Number: EPA-HQ-OAR-2022-0389-0206-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

The Solution is Dilution – Move the Runup Area Away From Surrounding Communities

The current, more stringent lead air standards are already being met at airports across the nation or can be met by relatively simple changes to aircraft operations within the airport property. In the “Proposed Rule” EPA references past lead concentration monitoring efforts, showing results in Table 2 – Lead Concentrations Monitored at 17 Airports in the U.S. as printed in the Federal Register/ Vol. 87 No. 199 page 62763. Found in Table 2 are two airports having lead design values exceeding the Lead NAAQS, revised in 2008 to 0.15 $\mu\text{g} / \text{m}^3$ of air. It is important to note that 12 of the 17 monitored airports had lead emission levels at less than 50% of today’s Lead NAAQS. It is also noteworthy to see that none of the subject airports would come anywhere close to exceeding the Lead NAAQS of 1.5 $\mu\text{g} / \text{m}^3$ that was in place while lead was being phased out of gasoline in the 70’s, 80’s, and 90’s. Results from the monitoring program would show that cases are rare where today’s Lead NAAQS are exceeded, representing 2 of 17, or 12% of those sampled. Although not necessarily delineated in the Table, an important observation is that 13 of the 17 listed airports are staffed with Air Traffic Control (ATC) personnel, while 4 are uncontrolled, see Table A of this report. Of those uncontrolled airports, the highest lead design value is reported for Auburn Municipal Airport at 0.06 $\mu\text{g} / \text{m}^3$, or only 40% of the maximum lead NAAQS.

[See original document for Table A]

Comment Number: EPA-HQ-OAR-2022_0389-0509-0001

Commenter Type: Private Citizen

Commenter: James Moore

Organization:

Excerpt Text:

Docket ID No. EPA-HQ-OAAR-2022-0389 The following are comments to the proposed rule making for lead emissions from aircraft engines. In review of the information provided it appears that several lead emission data presented does not reflect the environmental impact of the emissions from aircraft as follows. Because of this data may not reflect the true environmental impact this regulation should be delayed until more accurate data can be developed and reviewed. 1. Much of the data was collected near airports where aircraft spend little time. Most time is at altitude and in conditions where engine performance is at it peak. The impact of lead on open air at altitude is far less than that at densely populated airports where aircraft spend little time and are operating at less than peak performance. While lead concentrations are higher near airports than other locations the data can be misleading. Most lead is emitted in cross country flight where the concentrations on the ground are deminimus. 2. Data for lead concentrations should be from ambient conditions not just in locations near airports. The data presented does not effectively represent the concentrations of lead in ambient conditions which represent over 99% of the air we breath. 3. The data for increased lead concentrations beyond 2022 do not reflect the breakthrough technology and approval of unleaded avgas. There is a significant push to have unleaded avgas available country wide in less than 5 years. 4. Table 2 does not address the localized conditions of the airports that were tested. The two airports that did not meet NAAQS standards may have unique conditions that result in increased concentrations. 5. NAAQS standards were not met by two airports out

of 17 where data was collected and shown in Table 2. This is less than 12% of the airports that do not meet standards. It is more cost effective to address the unique situations in a few airports than to establish regulations for 100% of the aircraft population. This is especially true in an environment where lead free avgas is approved and moving toward distribution in the next five years.

Comment Number: EPA-HQ-OAR-2022_0389-0655-0001

Commenter Type: Private Citizen

Commenter: Travis Alexander

Organization:

Excerpt Text:

Seems like a solution in search of a problem. Zero evidence that the relatively microscopic portion of combustible engines that use "low lead" av gas are creating a hazard to anyone. Once again I see the die hard, brainwashed, climate change religious zealots begging for regulation of something completely benign to them. One member of the herd alleges that something is killing them and they all take it for fact. Lead is toxic, but not in microscopic, bordering on zero dosage. I'm a "hard no" on the government intervening on this issue.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0007

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

As EPA continues to determine whether to finalize the Proposal, and, recognizing that no level of lead in the bloodstream above zero is free of all risk, it is worth reiterating that the vast majority of the United States has attained the stringent lead NAAQS, which are set to protect human health with an "adequate margin of safety." [Footnote 15: The CDC also maintains a standard and uses a blood lead level (BLL) or blood lead reference value (BLRV) of 3.5 micrograms per deciliter to identify children with BLLs that are higher than most children.]

Response to Comments Asserting that Lead Concentrations in Air Cause No Harm and Exceed the Lead NAAQS at Only a Few Airports

Some commenters state that concentrations of lead exceeding the lead NAAQS are rare, representing two of 17 airports studied. One commenter also notes that Table 2 (duplicated in Section II.A.3 of the final notice for this action) does not address the localized conditions of the airports studied and that the airports where lead concentrations violated the lead NAAQS may have unique conditions that resulted in the concentrations measured. Some commenters state that given the number of hours flown by covered aircraft, they do not contribute enough lead to affect air pollution. Additionally, some commenters state that there is no evidence that engine emissions of lead are creating a hazard, and that the lead emitted is not toxic in the small amount emitted by aircraft engines. The EPA responds to these comments in Section V.C of the final notice for this action.

In further response to these comments, the Agency notes that while contributions by covered aircraft to lead concentrations that exceed the NAAQS support the cause or contribute finding, today's finding is made under section 231(a) of the CAA, not under the sections of the Act that relate to NAAQS attainment. These comments seem to presume that the EPA should disregard the exceedances of the lead NAAQS at 2 of 17 airports studied in making the cause or contribute finding, but the comments have failed to explain with reasonable specificity why the Agency cannot or should not take into account these exceedances of the lead NAAQS in making the cause or contribute finding. Section 231(a)(2)(A) of the CAA, as explained in Section III of the final notice for this action, requires the Administrator to determine whether, in his judgment, an air pollutant emitted by a class of aircraft engines causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare. The Administrator is making that determination in this final action. To the extent that these comments suggest that Section 231(a) requires as part of making a cause or contribute finding that the Administrator additionally find that the air pollutant is a criteria pollutant, or that a minimum number of air quality regions in the nation are designated to be in nonattainment for such criteria pollutant, or that the relevant classes of aircraft engines contribute to such nonattainment in a minimum number of air quality regions, that suggestion is unsupported. Section 231(a) does not require any of these as a precondition to making a cause or contribute finding. Rather, EPA's mandate under section 231(a) is independent of and additional to any requirements relating to the NAAQS in title I of the Act. Moreover, the fact that Congress chose not to state the commenter's preferred criteria as preconditions for making a cause or contribute finding is especially relevant in light of the fact that elsewhere in the Act, Congress did state specific criteria relating to nonattainment as a prerequisite for regulation. See, e.g., CAA section 213(a)(2) (requiring the Administrator to determine whether certain emissions "are significant contributors to ozone or carbon monoxide concentrations in more than 1 area which has failed to attain the national ambient air quality standards for ozone or carbon monoxide").

Some of these commenters argue that the current lead air standards are already being met at airports across the nation and that while no level of lead in the bloodstream above zero is free of all risk, the vast majority of the U.S. has attained the stringent lead NAAQS which are set to protect human health with an adequate margin of safety. One comment further asserts that it is noteworthy that 12 of the 17 monitored airports had lead emission levels at less than 50% of the current lead NAAQS and none of the monitored airports came close to exceeding the lead NAAQS of 1.5 $\mu\text{g} / \text{m}^3$ that was in place while lead was being phased out of gasoline. In response, the EPA first notes that, as described in Section IV.A.2 of the final notice for this action, there is no evidence of a threshold below which there are no harmful effects on cognition in children from lead exposure. In addition, as described in Section V.D of the final notice, the EPA concludes, based on the data described in Section V.B of the final notice that in some situations lead emissions from covered aircraft have contributed and may continue to contribute to air quality that exceeds the lead NAAQS. Given that the lead NAAQS are established to provide requisite protection of public health and welfare, the Administrator expresses particular concern with contributions to concentrations that exceed the lead NAAQS, as described in those sections of the final notice. To the extent that these comments suggest that the number of areas or airports where the lead NAAQS is attained precludes the EPA from making a finding that covered aircraft emissions of lead cause or contribute to lead air pollution, the comments do not explain with reasonable specificity why that would be the case. Further, as described above in this section of this RTC document, Section 231(a) of the CAA does not require the Administrator to find that the air pollutant is a criteria pollutant, or that a minimum number of air quality regions in the nation are designated to be in nonattainment for such criteria pollutant, or that the relevant classes of aircraft engines contribute to such nonattainment in a minimum number of air quality regions, as a precondition for making a cause or contribute finding. Similarly, to the extent that these comments suggest that whether or not there are exceedances of a prior lead NAAQS have some relevance to the cause or contribute finding, they have not explained with reasonable specificity what bearing a lack of exceedances of a prior lead NAAQS, which has since been revised to provide requisite protection of public health and welfare, would have this finding or why.

Additionally, some of these commenters argue that lead air standards can be met by relatively simple changes to aircraft operations within the airport property.⁴³ Many of these commenters argue that runup areas should be moved away from surrounding communities to dilute and, therefore, solve the issue of elevated lead concentrations from aircraft. Additional, related comments assert that it is more cost effective to address the unique situations in a few airports than to establish regulations for 100% of the aircraft population. In response, the EPA notes that these comments confuse the straightforward scientific judgment about whether aircraft emissions of lead cause or contribute to lead air pollution by focusing on mitigation of the lead air pollution. To use an analogy, the question of what the appropriate cure might be, or what impacts the cure might have, is different than the question of whether there is an illness in the first place. The question of whether covered aircraft engine emissions of lead cause or contribute to lead air pollution which may reasonably be anticipated to endanger public health and welfare is like the question of whether there is an illness. Once one knows there is an illness, then the next question is what to do, if anything, in response to that illness. In this final action, the Administrator finds that emissions of lead from covered aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare pursuant to section 231(a)(2)(A) of the CAA. As described in Section III of the final notice for this action, in issuing these final findings, the EPA becomes subject to a duty under CAA section 231 regarding emission standards applicable to emissions of lead from covered aircraft engines, but the EPA is not proposing or promulgating any standards in this action. Accordingly, to the extent these comments suggest approaches for, or potential concerns with, such standards, they are beyond the scope of this action and thus require no further response.

In this section of the RTC, the EPA is focusing on comments related to assertions that lead concentrations in air do no harm and exceed the lead NAAQS at only a few airports. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, the Agency responds to comments about contributions to the lead inventory by aircraft in Section 6.1.1 in this document, about trends in aviation activity in Section 6.1.2, and the fate and transport of lead from covered aircraft in Section 6.1.3 of this document. The EPA also responds to comments asserting that covered aircraft emit a small amount of lead in Section 6.2.1 of this document. The EPA responds to comments about its model-extrapolated estimates of airborne lead concentrations in Section 6.2.4 of this document. Finally, the EPA responds to comments about the aircraft industry in Section 8.5 of this document.

6.2.3. Comments Asserting that Lead Concentrations in Air Indistinguishable from Background Concentrations Do Not Endanger Public Health

Comment Number: EPA-HQ-OAR-2022-0389-0206-0012

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

A plain reading of the CAA illustrates that Aircraft are not Motor Vehicles and EPA would not have the authority to regulate Aircraft or the fuel used in Aircraft. Even though we do not support EPA mandating fuel by regulations, we do share similar concerns of lead emissions from aircraft. We are convinced that there is a common-sense solution that can be immediately implemented in those areas where excessive lead emissions exist. We contend that if lead emissions from aircraft are undetectable from background levels of lead, then it stands to reason that there can be no potential for endangerment outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE). Provided that this premise is sound, then it simply is not necessary for EPA to regulate the entire fleet of piston engine aircraft in order to meet its

⁴³ The EPA notes that comments raising this point are also excerpted in other sections of the RTC, including Sections 6.2.3, 6.2.4, and 8.2.3.

objective of safeguarding the public where it can be “reasonably anticipated that leaded aircraft fuel contributes to air pollution that would endanger public health and welfare”. We request that EPA instead focus its resources and energy along with FAA to assure Environmental Justice expeditiously by considering and implementing the CODALE approach at sensitive airports.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Appendix B

Controlled Airports and Associated Airport Diagrams with CODALE Applied

The airport diagrams shown in this appendix are to further illustrate the application of CODALE in managing aircraft engine emissions. These airports were chosen because they existed in the original study of 17 airports where lead concentrations were monitored. Each of the 11 airports shown in this appendix are controlled airports, none of which demonstrated lead values in excess of the current lead NAAQS.

The Cone of Distinguishable Aviation Lead Emissions (CODALE) represents an area where lead emissions could be detected – at levels greater than background levels. Areas outside of the CODALE would have lead levels indistinguishable from background levels. When it comes to exposure to lead emissions – Dilution offers an immediate is the Solution

Airport Diagrams Included in Appendix B

Centennial Airport, CO

Deer Valley, AZ

Gillespie Field, CA

Merrill Field, AK

Nantucket Memorial Airport, MA

Oakland County International, MI

Palo Alto Airport, CA

Reid-Hillview Airport, CA

Republic Airport, NY

Stinson Municipal, TX

Van Nuys Airport, CA

[See original document for airport diagrams]

Comment Number: EPA-HQ-OAR-2022_0389-0665-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I would urge against the banning of leaded aviation fuel. The coalition for sustainable aviation (CSA) offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public

Comment Number: EPA-HQ-OAR-2022_0389-0650-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Dear EPA, The last thing the American people need is more government regulation.

- o If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public.
- o Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public.
- o The solution is simple, move the runup area away from the property boundary. The Solution is Dilution.
- o There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions.
- o Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary.
- o The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions.
- o By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case. <https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf>
- o The banning of certain fuels at airports will and has resulted in misfuelling of aircraft: <https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf>
- o Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0651-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public.

Comment Number: EPA-HQ-OAR-2022_0389-0653-0001

Commenter Type: Private Citizen

Commenter: Kerr Bisch

Organization:

Excerpt Text:

- o If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public.
- o Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public

Comment Number: EPA-HQ-OAR-2022_0389-0669-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

Throwing out the baby with the bathwater is not the answer. Look below to see a solution path before cutting general aviation off at the knees. It's not just wealthy people with toys. General aviation touches many. Supplying a stream of future airline pilots among those. CSA offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public. The solution is simple, move the runup area away from the property boundary. The Solution is Dilution. There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case.

Comment Number: EPA-HQ-OAR-2022_0389-0705-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Rob Reece

Organization:

Excerpt Text:

CSA (Coalition for Sustainable Aviation) is a non-profit organization formed for the purpose of advocacy on behalf of pilots today - and more importantly for a sustainable GA future. They have more than 35 years of experience in this area and I completely agree with their finds from the data collected by the EPA. CSA offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public. The solution is simple, move the runup area away from the property boundary. The Solution is Dilution. There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case.

<https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf> o The banning of certain fuels at airports will and has resulted in misfuelling of aircraft:

<https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf> o Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0663-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Kay Frizzell

Organization:

Excerpt Text:

These remedies are contained in aforementioned CSA comments. These would be safe and cost effective. Lead emissions from these type of aircraft engines are indistinguishable from background levels of lead. Therefore, aircraft emissions from these type of aircraft engines are not endangering the public. The Run Up area used to warm up our engines so that they are safe to fly would be the only place where a higher amount of lead would be emitted into the environment. And that emission would quickly be diluted in a very short distance. This is a easy solution. Just make sure that the Run Up area is moved from property boundaries that are anywhere near the public! There is no need for additional oversight by another Federal Agency. The FAA has all the authority necessary to manage aircraft emissions. If Congress intended for EPA to regulate aircraft they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. I agree with the common sense comments submitted by the Coalition for Sustainable Aviation (CSA) and I am respectively requesting that EPA address the concerns expressed by CSA. Thank you very much. Kay M Frizzell

Comment Number: EPA-HQ-OAR-2022_0389-0704-0001

Commenter Type: Private Citizen

Commenter: Richard Holtz

Organization:

Excerpt Text:

This is classic redundancy and overreach. There is no need for additional oversight by another agency of the government. FAA has all the authority necessary to manage aircraft and their emissions. It has been acting on the issue for many years. Overall, research shows that the problem is minimal and shrinking. In most cases, lead emissions from aircraft exhaust are indistinguishable from background levels of lead, so it stands to reason that aircraft emissions are not endangering the public.

Comment Number: EPA-HQ-OAR-2022_0389-0683-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Chris Bailey

Organization:

Excerpt Text:

Ultimately, I agree wholeheartedly with the comments put forth by the Coalition for Sustainable Aviation. To have immediate positive effects, the FAA can institute the "dilution is the solution" method and alter run-up areas on impacted airports. The data supports that by doing this, aviation lead is indistinguishable from background levels, and therefore, not the true issue when discussing impacts to human welfare in the adjacent vicinity. In conclusion, the EPA proposed rule is an absolute over reach. The FAA currently has all the power and regulatory oversight to immediately resurrect the issue presented. In the event the proposed rule is enacted, there will be federal litigation (case in point when the U.S. Supreme Court ruled EPA over reach in West Virginia) and Congressional involvement to maintain the status quo until safe and reliable solutions can be developed for the long term.

Comment Number: EPA-HQ-OAR-2022-0389-0239-0001

Commenter Type: Private Citizen

Commenter: Alan Hoover

Organization:

Excerpt Text:

The minor amounts of lead emissions per piston driven aircraft in flight typically do not bring the amount of lead concentrations above background noise levels. This fact is clearly spelled out in the 11 January 2023 comments from the Coalition for Sustainable Aviation. The highest concentrations of lead emissions occur within 500 meters of a pre-flight ground run-up or engine check which is a necessary safety check before flight.

Response to Comments Asserting that Lead Concentrations in Air Indistinguishable from Background Concentrations Do Not Endanger Public Health

Commenters make a variety of statements regarding concentrations of lead from piston driven aircraft that the comments assert are indistinguishable from background⁴⁴ concentrations. Some of these commenters contend that if lead emissions from aircraft are undetectable from background levels of lead, then it stands to reason that there can be no potential for endangerment. Some commenters assert that by altering the location of run-up areas, aviation lead is indistinguishable from background levels, and therefore, not the true issue when discussing impacts to human welfare. Other commenters claim that research shows that the problem is minimal and shrinking and that in most cases, lead emissions from aircraft exhaust are indistinguishable from background levels of lead, so are not endangering the public. At least one additional commenter asserts that the minor amounts of lead emissions per piston driven aircraft in flight typically do not bring the amount of lead concentrations above background noise levels.

In response to the commenters asserting that altering the location of run-up areas will result in aviation lead concentrations that are indistinguishable from background levels or otherwise address concerns regarding lead emissions from covered aircraft, the EPA notes that the commenters confuse the straightforward scientific judgment about whether emissions of lead from covered aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare by focusing on the question of what can be done to mitigate the lead air pollution. As explained more fully in the EPA's response to similar comments in Section 6.2.2 of this RTC document, these comments conflate the question of whether there is an illness in the first place with the question of what an appropriate cure might be. Further, to the extent these comments suggest potential approaches for mitigation of the lead air pollution, they are to beyond the scope of this action and thus require no further response, as the EPA neither proposed, requested comment on, nor is promulgating any emissions standards or other mitigation measures in this action.

In response to commenters' assertions that covered aircraft engine emissions of lead that result in concentrations of lead that are indistinguishable from background concentrations do not endanger public health, or are not the true issue for human welfare impacts, the EPA notes, as an initial matter, that, these comments conflate the endangerment and cause or contribute steps of the two-step analysis that the EPA is employing in this action, as explained in Section III.A of the final notice for this action. As described more fully in Sections III and V of the final notice for this action, including in the response to comments in Section V.C, the text in section 231(a)(2) of the CAA provides for the EPA to make a cause or contribute finding based on a determination that emissions of the air pollutant from the covered aircraft engine "causes, or contributes to" the air pollution. In making this finding, the EPA need not additionally

⁴⁴ The commenter did not define "background concentrations," however, this term typically refers to the ambient air concentration that reflects concentrations away from the influence of local sources.

and separately make a determination as to whether the emissions from covered aircraft engines alone endanger public health or welfare. To the extent these comments argue that the lead air pollution does not endanger public health or welfare,⁴⁵ we disagree for the reasons explained in Section IV of the final notice for this action. To the extent these comments argue that lead emissions from engines in covered aircraft do not contribute to the lead air pollution above background levels, we disagree. As described in Sections II.A.3 and V.B of the final notice, and briefly summarized here, studies reporting lead concentrations near airports where covered aircraft operate on leaded fuel indicate that over a three-month averaging time (the averaging time for the Lead NAAQS), the engine emissions of lead from covered aircraft are estimated to contribute to air lead concentrations above background to a distance of at least 500 meters downwind from a runway.^{46,47} Additional studies have reported that lead emissions from covered aircraft may have increased concentrations of lead in air by one to two orders of magnitude at locations proximate to aircraft emissions, compared to nearby locations not impacted by a source of lead air emissions.^{48,49,50} Additionally, as explained more fully in Section V of the final notice, the EPA notes that concentrations of lead that have been measured that violate the lead NAAQS at two airports. As explained in Section V.D of the final notice, these data support the final finding that emissions of lead from covered aircraft engines cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare.

In response to the comment claiming that research shows that the problem is minimal and shrinking, the EPA notes that this is a conclusory allegation and that the commenter did not provide references to such research or identify any support for these statements with reasonable specificity. In addition, the EPA does not agree with the commenter's characterization of the problem. As discussed in Sections II.A.2, V.B and V.D of the final notice, while the national consumption of leaded avgas is forecast to decrease slightly from 2026 to 2041 commensurate with overall piston-engine aircraft activity, these changes are not expected to occur uniformly across the U.S.⁵¹ For example, the FAA forecasts for airport-specific aircraft activity out to 2045 project decreases in activity by general aviation at some airports, but it projects increases at other airports.⁵² For the reasons described in Section V.D of the final notice, the Administrator considers that current lead emissions from covered aircraft are an important source of air-

⁴⁵ With respect to the comments' assertion that aviation lead is not the true issue for impacts to human welfare in the adjacent vicinity, we note that it is not clear what the comment means to refer to with the term "human welfare" nor have they identified what they believe the true issue is with respect to this parameter. As explained further in Section III.A of the final notice for this action, the relevant statutory phrase is "public health or welfare," and the meaning of both public health and public welfare, which are distinct terms, is discussed further in Section III.A.

⁴⁶ Carr et. al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795-5804. DOI: <http://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

⁴⁷ EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

⁴⁸ Carr et. al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795-5804. DOI: <http://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

⁴⁹ Heiken et.al., 2014. Quantifying Aircraft Lead Emissions at Airports. ACRP Report 133. Available at <http://www.nap.edu/catalog/22142/quantifying-aircraft-lead-emissions-at-airports>.

⁵⁰ Hudda et.al., 2022. Substantial Near-Field Air Quality Improvements at a General Aviation Airport Following a Runway Shortening. *Environmental Science & Technology*. DOI: 10.1021/acs.est.1c06765.

⁵¹ FAA Terminal Area Forecast provides projections of aircraft activity at airports. The forecast is available at <https://taf.faa.gov> and the [FAA Terminal Area Forecast](https://taf.faa.gov) for Fiscal Years 2020-2045 describes the forecast method, data sources, and review process for the TAF estimates, available at: <https://taf.faa.gov/Downloads/TAFSummaryFY2020-2045.pdf>.

⁵² Geidosch. Memorandum to Docket EPA-HQ-OAR-2022-0389. Past Trends and Future Projections in General Aviation Activity and Emissions. June 1, 2022. Docket ID EPA-HQ-2022-0389.

related lead in the environment, and is concerned about the likelihood that they will continue to be in the future, if uncontrolled.

In response to the comment stating that the minor amounts of lead emissions per piston driven aircraft in flight typically do not bring the amount of lead concentrations above background noise levels, and that the highest concentrations of lead emissions occur within 500 meters of a pre-flight ground run-up or engine check, the EPA notes to the extent that the comment suggests that the evaluation should occur on a per-aircraft basis, we disagree. Our evaluation for the cause-or-contribute step of the analysis did not focus on lead emissions per individual aircraft. This approach is consistent with the text of CAA section 231(a)(2)(A), which refers to “any class or classes of aircraft engines.” As explained further in Section III.A of the final notice, at the cause-or-contribute step (the second step of the two-part test the Agency is employing in this action), the question is whether emissions of an air pollutant from certain classes of aircraft engines cause or contribute to the air pollution. Thus, the focus is appropriately on the class as a whole, not on individual engines or aircraft. The EPA responds to comments suggesting that aircraft lead emissions are minor or below background levels elsewhere in this section of the RTC.

In this section of this RTC document, the EPA is focusing on comments related to assertions lead concentrations in air indistinguishable from background concentrations do not endanger public health. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, we respond to comments regarding whether the EPA is establishing any regulation or restriction regarding use of aviation fuel in Section 7.3 of this Response to Comments document and to comments regarding our authority under section 231 of the CAA in Section 7.1 of this RTC document. The EPA also responds to related comments regarding changes to aircraft operations within the airport property as a means to mitigate downwind concentration of lead in Sections 6.2.2, 6.2.4 and 8.2.3 of this RTC document.

6.2.4. Comments on EPA’s Model-Extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports

Comment Number: EPA-HQ-OAR-2022-0389-0206-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

Much of EPA’s basis for the “Proposed Rule” appears to be by modeling of 13,000 airports in the peer-reviewed report titled, “Model-Extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports”. This model was created using a Monte Carlo simulation using data from a single “model airport”. Each airport then had scaled corrections applied to it to determine a projected lead concentration. The two main variables corrected for were lead concentration of fuel and quantity of LTOs. It seems problematic, and certainly not realistic, that the subject analysis extrapolated data from a single airport to determine lead emissions near run-up locations for over 13,000 airports. There are many more variables that can’t easily be corrected for, including meteorological data, airplane models, airport specific runup behavior, etc. The variability of these factors cannot be captured without collecting data from multiple, geographically diverse airports. Considering the multitude of variables unaccounted for, the statistical significance of the referenced model calls into question the ability to reliably identify exact airports that would potentially exceed Lead NAAQS.

A critique of the previous studies and an attempt to put the scale of findings into context is offered in Appendix A of our comments.

[Underlined: Recognizing that these studies are limited in scope and sampling, there are a few key observations that can be taken from the Lead Monitoring activity]

The most relevant observations are:

- Highest lead emissions occur within 15 meters downwind of the high impact site. (Namely, aircraft exhaust in the runup area on the down wind end of the airport)
- Lead concentrations decrease to below the standard within 50 meter from the location of highest concentration. (Lead NAAQS are exceeded within the 50 meters, but not exceeded past the 50 meters)
- Lead concentrations decrease sharply as distance from the runup area increases. (When it comes to lead exposure, the further from the runup area the better)
- Concentrations of lead from piston engine aircraft emissions can be elevated above background levels at distances of 500 meters over a rolling three-month period. (Lead emissions may be detected, but do not exceed the Lead NAAQS at 500 meters)
- On individual days, concentrations of lead from piston-engine aircraft emissions can be elevated above background levels at distances of 1000 meters on individual days downwind of a runway, depending on aircraft activity and prevailing wind direction. (Detection of Lead emissions at this distance would not be on the same basis of the 3 month average utilized for the NAAQS, but possibly distinguishable from background lead in a given air sample.)

[Underlined: Simple changes in airport ground operations provides a ready solution to those airports that do not meet today's Lead NAAQS.] Recognizing the key variables in EPA's referenced studies, we undertook a simplistic evaluation of those airports listed in Table 2 of the "Proposed Rule", considering runup areas, distances, and prevailing winds. In order to better conceptualize the distribution of lead resulting from piston engine aircraft emissions, we set out to define an area that could be potentially affect by any incremental lead emissions resulting from aircraft. Our focus is therefore at the runup area and where lead from aircraft could be measured and distinguished from background lead. Using the observations derived from EPA's work above, and applying a basic assumption that airport runways are aligned with prevailing winds, an area was defined as the Cone of Distinguishable Aviation Lead Emissions (CODALE). Using the observations from the sources referenced in the "Proposed Rule", and applying two basic assumption, the CODALE was established to be an area represented by a cone spanning an arc of 90 degrees at a distance of 500 meters from the run-up area. Typically, prevailing winds would be straight down the runway, varying no more than 45 degrees side to side (what would be referred to by pilots as quartering winds), hence the rationale for a 90 degree arc.

500 meters was chosen as the arc length for CODALE since that distance corresponds with the distances used in Tables 3, 4, 5, and 6 of the "Proposed Rule" to alleviate potential disparities of age, race, and ethnicity as it relates to distances from airport operations. This then would be the area to concentrate on to best address Environmental Justice. It is interesting to note that our evaluation also considered the 1000 meter range, with the same conclusions. The distance of 500 meters is especially important because it is the maximum distance that the study titled, "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels" was able to prove had a statistically significant increase in blood lead levels in children

Having established CODALE, we proceeded with an evaluation of the 17 airports listed in Table 2 of the "Proposed Rule". Additional data was collected for the subject airports and is shown in Table A of our comments. The length of the runway is a key variable in our study, ranging from 2,443 feet at Palo Alto Airport in California to the longest of 10,001 feet at Centennial Airport in Colorado. Where multiple runways existed at a particular airport, we chose to only consider and evaluate the longest runway. The average airport runway length was 5,300 ft, or 1616 meters. Cone of Distinguishable Aviation Lead Emissions (CODALE) is 500 meters in length, the average runway length would provide 3.2 times more distance than necessary to fully disperse lead emissions to a concentration indistinguishable from background levels.

We collected FAA published airport diagrams for each of the 13 controlled airports in the sample set and are providing them herein. In those instances where runup areas are identified, these were then selected as the high impact point. In those instances where runup areas were not identified, an estimate was made as to where the probable runup locations would be on the field based on the diagram and runway location. Handwritten notes related to scaling and establishing the CODALE are shown freehand on the diagrams. Our approach was that of proof of concept, a more thorough survey and collection of data at subject airports would yield more precise results. In all instances, the CODALE was established upwind, causing the distribution of exhaust gaseous to occur preferential on the airport property.

In the cases of the two California airports having lead concentrations greater than current lead NAAQS, McClellan-Palomar and San Carlos, Diagram 1 and Diagram 2 illustrate that CODALE remains on the airport property. Keeping in mind that lead monitoring outside of the CODALE would show lead levels that are indistinguishable from background concentrations of lead. We suggest that implementing the proposed CODALE solution would yield immediate results, benefiting those potentially impacted by aircraft engine emissions.

[See original document for airport diagrams 1 & 2]

[Underlined: Expanded on the concept of CODALE by illustration at additional airports.] Even though none of the 15 remaining airports in the study show lead levels to exceed the current lead NAAQS, we expanded our analysis of CODALE to further illustrate its effectiveness as a viable solution for managing aircraft engine lead emissions. We were able to collect additional airport diagrams from FAA sources for the remaining 11 controlled airports, overlaying those with the proposed CODALE methodology. The CODALE modified diagrams are included in Appendix B for your review and consideration.

[Underlined: A solution exist to modify ground operations rather than modify engines or fuel for in-flight operations to meet the stated objective of the Proposed Rule.] In every case evaluated, the CODALE remained on the airport property. The airport schematics provide a pictorial depiction of how lead emission would be reduced to levels indistinguishable from background levels before leaving the airport property, all contained within the CODALE. In other words, the solution to the problem is to relocate runup areas to the upwind end of the runway. The solution is dilution. The significance of this observation is that lead emissions can be immediately addressed, without the need to mandate new fuels or modify the existing aircraft fleet. This solution provides for environmental justice without the burden, costs or safety concerns associated with a mandated fuel approach. The proposed solution would not require the expansion of regulatory authority, but instead FAA could exercise its current authority and implement these procedural changes through existing avenues. Efforts could be focused at those airports that are high risk or in close proximity to sensitive areas, such as McClellan-Palomar CA, San Carlos CA, and Reid-Hillview CA, saving both government and private sector time and resources.

[Underlined: CSA does not advocate the use of a CODALE solution at every controlled airport.] CSA would support the use of the CODALE solution only at those facilities demonstrating higher lead levels than meets the NAAQS, and those airports that seek a ready solution for Environmental Justice. CSA recognizes that the additional ground operations, requiring aircraft to taxi greater distances prior to takeoff, does expose pilots to higher risk of runway or taxiway incursions and must be taken into consideration before implementing the CODALE solution at a particular airport. FAA is keenly focused on runway incursions today and could simply incorporate CODALE into these important safety policies and procedures.

[Underlined: An opportunity exists to optimize the management of Aviation Piston Engine emissions while minimizing the risk to pilots.] By utilizing a midfield runup area, Grand Junction Regional Airport (KGRT) in Colorado has already implemented the ideal solution when considering both emissions and pilot safety. Diagram 3 in our comments today illustrates pictorially how lead emissions, distinguishable above background levels, are managed onsite, while minimizing ground operations of pilots prior to take-off. By establishing the runup area midfield, Grand Junction airport has given pilots the ability to

performer the important runup phase of flight at a distance far away from the property boundaries and any surrounding communities. Grand Junction proves that there is a workable solution, already in place today.

[See original document for airport diagram 3]

CSA encourages FAA and EPA to take this real-world example and expand on its application. FAA and EPA, along with the appropriate airport managers, could work together, considering risk, balanced with the need for Environmental Justice, as they determine the best airports and methods to implement CODALE. Effectiveness could be measured directly through the appropriate monitoring studies. We would expect the total number of airports to be a very small percentage of the 13,000 US airports considered in the “Proposed Rule”. CSA would expect less than 100 airports nationwide.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0011

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

In the study “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airport”, there was a significant effort to account for a number of known factors that would add variation in lead quantity in the air, like lead concentrations in the AvGas and runup time. However, the sources of data that were used to estimate that variation often used a small number of airports. The runup time study only used 5 airports. The study states that runup time was considered the largest factor that was attributed to lead concentrations. A few particularly inefficient engines in the model airport could cause a massive shift in final analysis. One thing that wasn’t accounted for is the model of airplanes and condition of the airplanes that are used on the field. These known factors would be extremely challenging to track. But there are plenty of unknown factors that could cause additional shifts in the population that could only be accounted for if a significantly larger and diverse sample was used.

If the EPA plans on using this type of analysis to make decisions, it is imperative that more data points are collected from more than one or two model airports and that those airports not be located in similar geologic locations. Although we were unable to find an industry standard for minimum sample locations for Monte Carlo simulations, it would be hard to find many practicing statisticians that believe that taking samples from one airport and extrapolating those findings out to 13,000 airports could reasonably create an accurate and robust model.

Response to Comments on EPA’s Model-Extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports

One commenter states that much of the basis for the proposed action appeared to be the EPA’s results from the report “Model-Extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports” and expresses views on that analysis in their main comment and in an appendix to their comment. In the appendix, this commenter argues that while the EPA had made a significant effort to account for a number of known factors in estimating lead concentrations in the air, the sources of data used included a small number of airports. In making this assertion, the commenter specifically states that runup durations were collected at 5 airports and that runup time was considered the largest factor related to lead concentrations. The commenter asserts that certain known factors that could have affected the analysis were not accounted for (e.g., model and condition of airplanes), and that there were unknown factors that could cause additional shifts in the population and that could only be accounted for if a larger and diverse

sample were used. The commenter asserted that if the EPA plans to use this type of model-extrapolated analysis to make decisions, it is imperative that more data points are collected from more than one or two model airports and that those airports not be located in similar locations. In the main comment, the commenter argues that it seems problematic, and certainly not realistic, that data from a single airport was used to determine lead emissions near run-up locations at over 13,000 airports. The commenter asserts that there are many more variables that can't easily be corrected for (e.g., meteorological data, airplane models, airport specific runup behavior, etc). and that the variability of these factors cannot be captured without collecting data from multiple, geographically diverse airports. The commenter states that “[c]onsidering the multitude of variables unaccounted for, the statistical significance of the referenced model calls into question the ability to reliably identify exact airports that would potentially exceed the lead NAAQS.”⁵³ The comment then states that recognizing that these studies are limited in scope and sampling, there are a few key observations that can be taken from them and suggests certain changes to airport ground operations as a solution to airports that do not meet the lead NAAQS.

In response to the comments regarding the EPA's use of the model-extrapolation estimates of lead concentrations at airports, the EPA notes that the information from the EPA's model-extrapolation approach provides one part of the larger body of evidence described by the EPA in Section V.B of the final notice which demonstrate the contribution of lead emissions from covered engines to the lead air pollution. As explained in Section V.D of the notice, other data and information summarized in Section V of the final notice also support the final cause or contribute finding. We note that even if the EPA had not described the results of the model-extrapolated lead concentration estimates near airports, in the Agency's view the rest of the evidence discussed in those sections of the final notice, would still be sufficient to support a finding that covered aircraft engine emissions of lead cause or contribute to lead air pollution.

With regard to the commenter's assertion that additional data is needed in order to use the information from the model-extrapolation approach in order to make decisions (e.g., regarding run-up durations, additional airport modeling in different geographic locations, information regarding inefficient engines in the aircraft population), the EPA does not agree that additional information is needed before finalizing the cause or contribute finding. To begin, the EPA has explained that conducting detailed air quality monitoring or modeling for lead at each of the 13,000 US airports was not feasible and explained the rationale for its approach, including the fact that it is based on a consistent set of parameters required for the safe operation of piston-engine aircraft.⁵⁴ In addition, the EPA notes that it took a number of measures to evaluate the uncertainties in its analyses. As described in Section II.A.3 of the final notice for this action and in Sections 3 and 4 of Appendix A to the TSD, lead concentrations at airports are influenced by certain factors. Aircraft consistently take off into the wind and typically conduct run-up operations immediately adjacent to the take-off runway end, and thus, modeling lead concentrations from this source is constrained by variation in a few key parameters, including the amount of piston-engine aircraft activity, the proportion of activity conducted at one runway end, the proportion of activity conducted by twin-engine aircraft, the duration of the run-up operations, the concentration of lead in avgas, wind speed, and additional meteorological parameters. As described in Section II.A.3 of the final notice and the TSD, these parameters were evaluated through sensitivity analyses as well as quantitative or qualitative uncertainty analyses. We describe and address many of those uncertainties in detail in the TSD.⁵⁵ The EPA conducted quantitative and qualitative analyses of the impact of runup duration and avgas lead content on lead concentration estimates and evaluated the impact of meteorological variables, including a

⁵³ Comment EPA-HQ-OAR-2022-0389-0206

⁵⁴ EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Page 8. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

⁵⁵ EPA (2022) Technical Support Document (TSD) for the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

quantitative analysis of prevailing wind direction and a peer-reviewed method for correcting estimated concentrations based on the wind speed at airports to which the modeled lead concentrations were extrapolated. Beyond that, as described in Table 4 in Section 3 of Appendix A to the TSD, to identify airports where lead concentrations potentially exceed the lead NAAQS, the EPA conducted a refined assessment that included using airport-specific data and additional sensitivity analyses. The results of these sensitivity analyses are provided in Table 7 in Section 4 of Appendix A to the TSD and indicate that even when considering a range of assumptions for key input variables, there are airports that potentially exceed the level of the lead NAAQS. Further, in response to the comment's questioning of the ability of the model to reliably identify exact airports that would potentially exceed the lead NAAQS, the EPA responds that it does not intend for estimated lead concentrations from this study to be used to determine attainment of the lead NAAQS at individual airports, and that is not purpose for which they are being considered in this action.⁵⁶ Rather, as described in Section V of the final notice, in this action they are being considered as part of evaluating whether engine emissions of the lead air pollutant from covered aircraft cause or contribute to the lead air pollution.

Additionally, the EPA evaluated the performance of the model-extrapolation approach by comparing model-extrapolated concentrations to monitored values. These comparisons show general agreement and suggest that the extrapolation method provides reasonable estimates of lead concentrations in air attributable to activity by piston-engine aircraft at airports.⁵⁷ While the EPA's approach did not incorporate every possible factor that might influence concentrations of lead at every individual airport, in light of this general agreement between model-extrapolated concentrations and monitored values, the EPA's view is that performance of the model is adequate for the study's objectives, as well as for the purposes for which the resulting estimates are considered in this action. In this regard, we note that the analyses' main objective was estimating the potential ranges of lead concentrations at and downwind of the anticipated area of highest concentration at airports in the U.S.,⁵⁸ based on a recognition that an earlier airport lead monitoring study⁵⁹ provided a small sample of the potential locations where emissions of lead from piston-engine aircraft could potentially cause concentrations of lead in ambient air to exceed the lead NAAQS and on the consideration that additional airports and conditions could lead to exceedances of the lead NAAQS at and near airports where piston-engine aircraft operate, as described in Section II.A.3 of the final notice.

With respect to the commenters' assertion regarding the need for collecting data from at multiple, geographically diverse airports to capture variability in certain additional factors that they say cannot be easily corrected for, the EPA responds that the commenter has not described with reasonable specificity what they mean by geographically diverse nor why that would be a relevant consideration for the recommended data collection. The EPA further responds that regionally, dispersion modeling parameters such as surface roughness, Bowen Ratio, and albedo may result in some uncertainty at downwind locations, but their impact on variability of the maximum impact site concentrations is mitigated due, in part, to the size of the area under consideration in the analyses (i.e., less than 50 meters from the aircraft

⁵⁶ EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Page 8. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>, see p.8.

⁵⁷ Peer reviewers generally agreed with the EPA's conclusions regarding the performance of the model-extrapolation approach, with one expert peer-reviewer noting that "The EPA report transparently notes limitations in reproducing modeled values in section 2.2. In my judgement, however, this level of model performance is consistent with the best available approaches and demonstrates a level of model skill that is beyond what I would consider acceptable. See EPA (2020) EPA Response to External Peer Review Comments on the EPA Report: Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA-420-R-20-004. Page 6. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YIWD.pdf>.

⁵⁸ EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Page 3. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

⁵⁹ See Appendices C and D of the TSD for this action.

run-up), as well as the consistency in on-airport characteristics (e.g., the run-up location) and land-use requirements immediately downwind of runways based on landing and take-off safety requirements (i.e., the absence of trees and other obstructions). In light of these considerations, as well as considerations described earlier in this response, such as the general agreement between model-extrapolated concentrations and monitored values and the purpose of the analyses, the EPA does not agree that it is imperative to collect additional data to make a cause or contribute finding in this action. The EPA further notes that, as described in Section III.A of the final notice, among other things, the statutory language in CAA section 231(a)(2) authorizes the Administrator to act in conditions of uncertainty and to weigh risks and to consider projections of future possibilities, while also recognizing uncertainties and extrapolating from existing data. Given the already strong and sufficient evidence to support the cause or contribute finding, EPA judges that developing the additional analysis suggested by the commenter would result in unnecessary and undue delay, and in turn frustrate the precautionary and preventative purposes of the statute.

The EPA additionally notes that peer reviewers were in agreement with the application of this model-extrapolation approach to describe the potential range of lead concentrations at airports and as a screening-level assessment of locations where the maximum concentration values at airports may potentially exceed the lead NAAQS.⁶⁰

After consideration of the comments on this subject, in the context of the information and perspectives provided in this response, the EPA concludes that it is reasonable to retain the use of these estimated lead concentrations as part of the larger body of data and information that informs the Administrator's judgment in making the cause or contribute finding in this action, for the reasons we describe above in this response.

In this section of this RTC document, the EPA is focusing on comments related to EPA's model-extrapolated estimates of airborne lead concentrations at U.S. airports. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, the EPA responds to related comments regarding changes to aircraft operations within the airport property as a means to mitigate downwind concentration of lead in Sections 6.2.2, 6.2.3 and 8.2.3 of this RTC document.

6.2.5. Comments Asserting EPA Made Suppositions in the Cause or Contribute Finding

Comment Number: EPA-HQ-OAR-2022-0389-0244-0004

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

Concerns on Finding:

There are several suppositions present in EPA's study. In Section 2, Emissions of Lead from Piston-Engine Aircraft, EPA writes " uncombusted alkyl lead was measured in the exhaust of motor vehicles operating with leaded gasoline and is therefore likely to be present in the exhaust from piston-engine aircraft." In Section 4, Fate and Transport of Emissions of Lead from Piston Engine Aircraft, EPA writes "lead emitted during the landing and takeoff cycle, particularly during ground- based operations such as startup, idle, preflight run-up checks, taxi and the take-off roll on the runway, may deposit to the local environment and/or infiltrate into buildings." EPA states in Section 3, Concentrations of Lead in Air

⁶⁰ EPA (2020) EPA Response to External Peer Review Comments on the EPA Report: Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA-420-R-20-004. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100YIWD.pdf>.

Attributable to Emissions from Piston Engine Aircraft “Airport-specific assessments would be needed to determine the magnitude of the potential range in lead concentrations at and downwind of each facility.” Of note, the EPA conducted a 1-year monitoring of Merrill Field in Anchorage, Alaska’s busiest general aviation airport, and the 30-day running average of the samples collected never exceeded the 50% NAAQS hazard threshold (see enclosure: Merrill Field Lead Monitoring Report). Alaska’s rural airports are different from airports in the contiguous U.S. in both set-up and operation and may not be accurately represented in this study. These statements are the crux of this health-based endangerment finding and should not be based on speculation.

Response to Comments Asserting EPA Made Suppositions in the Cause or Contribute Finding

One commenter asserted that there are several suppositions present in the EPA’s study that are the crux of the health-based endangerment finding and should not be based on speculation. Specifically, the commenter points out the following statements in the EPA proposed findings: 1) “uncombusted alkyl lead was measured in the exhaust of motor vehicles operating with leaded gasoline and is therefore likely to be present in the exhaust from piston-engine aircraft”; 2) “lead emitted during the landing and takeoff cycle, particularly during ground-based operations such as startup, idle, preflight run-up checks, taxi and the take-off roll on the runway, may deposit to the local environment and/or infiltrate into buildings”; and 3) “Airport-specific assessments would be needed to determine the magnitude of the potential range in lead concentrations at and downwind of each facility.”

In response, the EPA first notes that it does not agree with the commenter’s conclusory characterization of these statements as suppositions, and we explain the data and information that support these statements in the following response. For the reasons described below, we do not view the commenter’s conclusory assertions as undermining any of these statements, particularly in light of the data and information that we describe below. We further note that while the commenter asserts without foundation that these points are the “the crux of the health-based endangerment finding,” we understand the specific arguments made in this comment to focus largely on points discussed as part of the cause or contribute step of the analysis. For that reason, the Agency is responding in Section 6 of this RTC document, rather than in Section 5.

With respect to the commenter’s assertion that the statement regarding the likelihood for uncombusted alkyl lead to be present in the exhaust from piston-engine aircraft based on data from motor vehicles operating with leaded gasoline is a supposition, the EPA responds that we have added information to Section II.A.2 in the final notice to further explain our view and the data on which it is based. As explained in Section II.A.2 of the final notice, the summary of the science regarding emissions of lead from motor vehicles that is presented in the 1997 and 1986 AQCDs for Lead is relevant to understanding some of the properties of lead emitted from piston-engine aircraft, as is information in the 2013 Lead ISA and other recent studies discussed in the final notice. It is appropriate for the EPA to consider the information on this topic summarized in the 2013 Lead ISA and the prior ACQDs for Lead, as these documents critically assess and integrate relevant scientific information regarding the health and welfare effects of lead and have undergone extensive critical review by the EPA, the Clean Air Scientific Advisory Committee (CASAC), and the public. Specifically, we note that these EPA assessments of the science identify that alkyl lead is among the forms of lead in the environment due to the combustion of leaded fuel.⁶¹ Additionally, the EPA is making a reasoned conclusion in stating that alkyl lead is likely to be present in the exhaust from piston-engine aircraft because the same chemical form of lead was used in the fuels powering motor vehicles in the 1970s as with current aircraft engines, and because of the similarity in the engines combusting these leaded fuels. Further, aside from characterizing the EPA’s

⁶¹ EPA (2013) ISA for Lead. Section 2.2.2.1 “Pb Emissions from Piston-engine Aircraft Operating on Leaded-Aviation Gasoline and Other Non-road Sources.” pp. 2-7 through 2-10. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

statement as a supposition, the commenter has not described with reasonable specificity any data or information indicating that alkyl lead is not present in, or is unlikely to be present in, the engine emissions from covered aircraft. Finally, the EPA notes that even if alkyl lead were not present in the engine emissions from covered aircraft, there are other forms of lead that are included in the lead air pollution and the lead air pollutant that are the subject of these findings (Sections IV.A.1 and V.A of the final notice describe the lead air pollution and the lead air pollutant). Consideration of these other forms of lead, which the commenter has not addressed, also persuasively supports these findings.

This same commenter asserts that the EPA is making a supposition by stating that “lead emitted during the landing and takeoff cycle, particularly during ground-based operations such as startup, idle, preflight run-up checks, taxi and the take-off roll on the runway, may deposit to the local environment and/or infiltrate into buildings.” The EPA responds as a general matter that this statement is a factual description of the transport and fate of particulate lead once emitted to the air. The 2013 Lead ISA describes the fate and transport of lead emitted to air which includes deposition of airborne lead onto soil and surface water.⁶² Additionally, in describing the potential for infiltration of air-related lead into indoor spaces, the 2013 Lead ISA describes studies reporting that the ratio of indoor to outdoor particulate lead varies from site to site depending on factors including infiltration from outdoor air, indoor and outdoor lead sources, and meteorology.⁶³ While these studies are not focused on aircraft lead, EPA is drawing reasonable conclusions based on relationships between these studies and the anticipated atmospheric transport of lead particles emitted by engines in covered aircraft. As described in Section II.A.4.b of the final notice, the EPA provides data estimating the potential deposition of lead from the exhaust of piston-engine aircraft in the near-airport environment. Also as described in Section II.A.4.b of the final notice, Heiken et al. (2014), noted that based on analysis of lead isotopes present in air samples collected at three airports, the original source of the lead found in the coarse particle range appeared to be from aircraft exhaust emissions of lead that previously deposited to soil and were resuspended by wind or aircraft-induced turbulence. This study indicates that lead emissions from piston-engine aircraft deposit to soil. The EPA further notes that, aside from characterizing the EPA’s statement as a supposition, the commenter has not described with reasonable specificity any data or information indicating that these lead emissions do not or cannot deposit to the local environment and/or infiltrate into buildings.

This commenter also appears to assert that the statement “Airport-specific assessments would be needed to determine the magnitude of the potential range in lead concentrations at and downwind of each facility” is a supposition. The EPA responds that this statement was made in a particular context: the EPA is noting that an annual airport lead inventory of 0.1 ton is illustrative of a threshold level that provides one approach for an initial screening evaluation of airports where localized lead concentrations in air may be elevated, potentially to levels that approach or exceed the lead NAAQS. Thus, the inventory approach is simply an initial step in understanding the subset of airports where further evaluation may be warranted. The EPA noted that in applying this approach, there are key pieces of airport-specific data that are needed to fully evaluate the potential for piston-engine aircraft operating at an airport to cause concentrations of lead in the air to exceed the lead NAAQS, and the EPA’s report “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports” provides quantitative and qualitative analyses of these factors.⁶⁴ The EPA further notes that, aside from characterizing the EPA’s statement as a supposition, the commenter has not described with reasonable specificity any reason to think the statement is incorrect or misplaced.

⁶² EPA (2013) ISA for Lead. Section 1.2.1 “Sources, Fate and Transport of Ambient Pb” pp. 1-6 through 1-7. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

⁶³ EPA (2013) ISA for Lead. Section 3.1.3.1 “Airborne Pb Exposure” pp. 3-11 through 3-15. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

⁶⁴ EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. p.53. EPA, Washington, DC, EPA-420-R-20-003, 2020.

This commenter also states that the EPA conducted a 1-year monitoring of Merrill Field in Anchorage, Alaska's busiest general aviation airport, and the 30-day running average of the samples collected never exceeded the 50% NAAQS hazard threshold. The commenter also asserts that Alaska's rural airports are different from airports in the contiguous U.S. in both set-up and operation and may not be accurately represented in this study. In response the EPA notes that commenter appears to mischaracterize or misunderstand aspects of the Merrill Field monitoring study. In the 2017 National Emissions Inventory, the EPA estimated, using the FAA data, that activity by piston-engine aircraft was highest at the Ted Stevens International Airport in Anchorage (not Merrill Field), and that in Alaska there are 10 airports that have lead inventories of 0.1 ton or more, where, as noted earlier in this response, there is a potential for lead concentrations in the air to approach or exceed the lead NAAQS. Also as described earlier in this response, an airport-specific assessment would need to be conducted to evaluate if lead concentrations at any of these 10 Alaska airports approach or exceed the lead NAAQS in the area the EPA has identified as having the highest concentrations of lead due to the pre-flight run-up check. The EPA notes that the higher lead consumption rates for the largest piston-engine aircraft that operate on leaded avgas in Alaska, such as the Curtiss C-46 and the Douglas DC-6, are not included in EPA's lead estimates in the NEI. The EPA's aircraft lead fuel consumption rates are based on aircraft fuel consumption rates for single and twin-engine aircraft that carry from 2-10 people. Thus, the EPA's estimates of lead emissions at airports in Alaska where these largest piston-engine aircraft operate is likely biased low.

With regard to the representativeness of airports in the contiguous U.S. to airports in Alaska, the EPA responds that the commenter does not explain with reasonable specificity what they mean by the statement that Alaska's rural airports may not be accurately represented in the EPA's study, and it provides no supporting information or evidence for this statement, aside from a conclusory and general assertion of differences in both set-up and operation, without explaining with reasonable specificity what those differences are or why they are relevant to this issue. To the extent that this comment is intended to suggest that Alaska's rural airports may not be accurately represented in the proposed endangerment and cause or contribute findings, the commenter did not discuss with reasonable specificity why it believes that might be the case, nor did the commenter identify any aspects of or elements of data used in the endangerment and cause/contribute finding that might not be relevant to rural airports in Alaska. With respect to the endangerment finding, the EPA notes that as described in Section III.A of the final notice, it is based on consideration of whether the lead air pollution may reasonably be anticipated to endanger public health or welfare; it is not based on consideration of any particular airport or type of airport, nor on consideration of emissions from any particular type of source category. This cause or contribute finding is based on consideration of whether lead emissions from covered aircraft engines cause or contribute to lead air pollution, which includes consideration, in part, of such lead emissions at airports, including rural airports in Alaska, as well as concentrations of lead measured in air, air quality modeling and model-extrapolation of lead concentrations from piston-engine aircraft, and future conditions, all of which were conducted for airports in Alaska, as well as the lower 48 states.⁶⁵ The commenter does not acknowledge these steps to include airports in Alaska in these analyses, much less explain why these measures do not address any potential concerns they may have. Further, the EPA notes that as described in Section III.A of the final notice, in making the cause or contribute finding, the Administrator must decide whether, in his judgment, emissions of an air pollutant from certain classes of aircraft engines cause or contribute to the

⁶⁵ This approach for conducting a nationwide analysis of airports, including those in Alaska, was selected due to the dominant impact of piston-engine aircraft run-up operations on ground-level lead concentrations, which creates a maximum impact area that is expected to be generally consistent across airports. Specifically, these aircraft consistently take-off into the wind and typically conduct run-up operations immediately adjacent to the take-off runway end, and thus, modeling lead concentrations from this source is constrained to variation in a few key parameters. These parameters include: 1) total amount of piston-engine aircraft activity, 2) the proportion of activity conducted at one runway end, 3) the proportion of activity conducted by multi-piston-engine aircraft, 4) the duration of run-up operations, 5) the concentration of lead in avgas, 6) wind speed at the model airport relative to the extrapolated airport, and 7) additional meteorological, dispersion model, or operational parameters.

air pollution. Thus, the cause or contribute finding is ultimately made with respect to the classes of the sources in question (here, any aircraft engine that is capable of using leaded aviation gasoline), not individual airports or a category or type of airport. In addition, a separate commenter stated concerns regarding lead concentrations measured in air at Merrill field and noted that lead in soil near Merrill field has been detected. This commenter stated that although they could not definitively conclude that the source of lead they detected in soil near Merrill field was derived from avgas combustion at Merrill Field, they noted it as a cause for concern that should be further investigated.

6.2.6. Miscellaneous Comments

Comment Number: EPA-HQ-OAR-2022-0389-0766-0001

Commenter Type: Private Citizen

Commenter: David Wartofsky

Organization:

Excerpt Text:

I just returned from family crisis, but wish to formally submit the following attachment.

Attached: Maryland Department of Environment formal reply on aviation lead in Montgomery County MD [2021 Letter from Maryland Department of Environment to Montgomery County Council re: lead emissions near Maryland airports]

While a noble objective where less hazard is better than more, it appears actual levels are below the level of technical detection?

Am I missing something? D

Comment Number: EPA-HQ-OAR-2022_0389-0509-0001

Commenter Type: Private Citizen

Commenter: James Moore

Organization:

Excerpt Text:

Docket ID No. EPA-HQ-OAAR-2022-0389 The following are comments to the proposed rule making for lead emissions from aircraft engines. In review of the information provided it appears that several lead emission data presented does not reflect the environmental impact of the emissions from aircraft as follows. Because of this data may not reflect the true environmental impact this regulation should be delayed until more accurate data can be developed and reviewed. 1. Much of the data was collected near airports where aircraft spend little time. Most time is at altitude and in conditions where engine performance is at it peak. The impact of lead on open air at altitude is far less than that at densely populated airports where aircraft spend little time and are operating at less than peak performance. While lead concentrations are higher near airports than other locations the data can be misleading. Most lead is emitted in cross country flight where the concentrations on the ground are deminimus. 2. Data for lead concentrations should be from ambient conditions not just in locations near airports. The data presented does not effectively represent the concentrations of lead in ambient conditions which represent over 99% of the air we breath. 3. The data for increased lead concentrations beyond 2022 do not reflect the breakthrough technology and approval of unleaded avgas. There is a significant push to have unleaded avgas available country wide in less than 5 years. 4. Table 2 does not address the localized conditions of the airports that were tested. The two airports that did not meet NAAQS standards may have unique conditions that result in increased concentrations. 5. NAAQS standards were not met by two airports out of 17 where data was collected and shown in Table 2. This is less than 12% of the airports that do not

meet standards. It is more cost effective to address the unique situations in a few airports than to establish regulations for 100% of the aircraft population. This is especially true in an environment where lead free avgas is approved and moving toward distribution in the next five years.

Response to Miscellaneous Comments

One commenter states that while it is a noble objective where less hazard is better than more, it appears that actual levels of lead are below the level of technical detection. The commenter also submitted an attached letter in which the Maryland Department of the Environment communicates that the Department discontinued the one remaining lead monitoring site in Maryland due to levels consistently below the analytical method's detection limit. In response the EPA notes that neither the comment nor the letter attached to the comment provide information on the location of this monitor nor addresses whether this monitor was near an airport at which covered aircraft operate. The Maryland Department of the Environment noted in their letter, correctly, that there were no airports in Maryland that exceeded the one-ton threshold for monitoring, and the EPA did not require monitoring at any airports in Maryland as part of the revised monitoring requirements in 2010. Further the commenter does not explain with reasonable specificity how their comment or the attached letter relate to the proposed action, nor did the commenter explain what, if any, aspect of the proposal this relates to, or what should be finalized differently based on this comment. Therefore, EPA considers this comment to not be adverse to this action, and thus it requires no further response.

One commenter states that it appears that lead emissions data presented by the EPA does not reflect the environmental impact of the emissions from aircraft, and that because of this, the action should be delayed until more accurate data can be developed and reviewed. Specifically, this commenter asserts that much of the data the EPA collected was near airports where aircraft spend little time and while concentrations are higher near airports, the data can be misleading and that most lead is emitted in cross country flight where the concentrations on the ground are de minimis. The EPA responds that it disagrees that the action should be delayed until more accurate data can be developed and reviewed. The commenter appears to have misunderstood the data the EPA relies upon to describe the contribution of lead emissions from covered aircraft includes both the total inventory of lead emitted annually at the national, state and county scale, as well as concentrations of lead in the air near airports. We note that these lead emission inventories are based on all covered aircraft activity, whether it occurs at altitude or on the ground.⁶⁶ In addition, while the EPA did not separately collect data regarding the concentration of lead in air during in-flight operations for this proposal, we provide information regarding the atmospheric chemistry, transport, and deposition of lead from covered aircraft. The commenter does not describe or explain with reasonable specificity why the data that the EPA did provide regarding concentrations of lead near airports, including the data from two airports where monitored concentrations of lead near airports violate the lead NAAQS, is not sufficient to support the Administrator's conclusion that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to the lead air pollution.

This commenter relatedly asserts that the data for lead concentrations should be from ambient conditions that represent over 99 percent of the air we breathe and not just from locations near airports. In response, the EPA notes that the commenter has not explained with reasonable specificity any reason why locations near airports would not or could not represent ambient conditions. To the contrary, the EPA is considering information reflecting concentrations in ambient air, as described in Sections II.A.3 and V.B of the final notice, where the Agency explains that it is considering three types of information about lead

⁶⁶ As described in Section II.A.2 of the proposed and final notice, the EPA estimates of lead emissions from piston-engine aircraft at the state level range from 0.3 tons to 50.5 tons, 47 percent of which is emitted in the landing and takeoff cycle and 53 percent of which the EPA estimates is emitted in-flight, outside the landing and takeoff cycle.

concentrations in the ambient air: monitored concentrations, modeled concentrations, and model-extrapolated estimates of lead concentrations. Further, the commenter has not explained with reasonable specificity who the “we” is in the reference to “the air we breath.” To the extent that the commenter assumes that people do not typically breathe the air near airports, the EPA responds that, as summarized in section II.A.5 of the final notice, it estimates that approximately 5.2 million people, including 363,000 children aged five and under live within 500 meters of an airport runway. Further, the commenter does not identify any legal or scientific reason for why the EPA should adopt their preferred approach. For the reasons discussed in sections III, IV and V of the final notice, the EPA concludes its approach is consistent with the statute and is reasonable from a scientific and technical perspective, and accordingly, it maintains its approach.

The same commenter asserts that the analysis the EPA provided does not reflect the breakthrough technology and approval of unleaded avgas, particularly related to the potential for increased lead concentrations beyond 2022, and the commenter further asserts that there is a significant push to have unleaded avgas available country wide in less than 5 years. In response, the EPA notes that the commenter does not identify any source of data or information that could help inform the EPA’s consideration of such a technology or approval in the context of its analyses. In evaluating the potential for increased activity by covered aircraft into the future, we analyzed data from the FAA; these data do not project which, if any, airports will be providing unleaded avgas in the future, nor do these data project the extent to which such avgas might be used in the scenario envisioned by the commenter. In fact, there is no authoritative data source that provides such projections. Further, even without consideration of these projections, the cause or contribute finding is also based on consideration of current conditions, and in the EPA’s view that information would still provide persuasive support for the Administrator’s conclusion that lead emissions from engines in covered aircraft cause or contribute to the endangering air pollution.

The EPA responds to the comment regarding the cost-effectiveness of addressing just a few airports rather than to establish regulations for aircraft in Section 6.2.2 of this RTC document. The EPA also responds to comments regarding the aircraft industry in Section 8.5 of this RTC document.

6.2.7. Commenters Asking EPA to Respond to Comments from the Coalition for Sustainable Aviation

Comment Number: EPA-HQ-OAR-2022_0389-0705-0004

Commenter Type: Aircraft Owner/Operator

Commenter: Rob Reece

Organization:

Excerpt Text:

I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0004

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that

EPA address the concerns expressed. I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0708-0001

Commenter Type: Private Citizen

Commenter: Tim Martin

Organization:

Excerpt Text:

I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution. I also request the the EPA address the concerns expressed by CSA.

Comment Number: EPA-HQ-OAR-2022-0389-0269-0001

Commenter Type: Private Citizen

Commenter: Kevin Purtee

Organization:

Excerpt Text:

I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. I am also encouraging the FAA to implement the CSA's proposed solutions.

Response to Comments Asking EPA to Respond to Comments from the Coalition for Sustainable Aviation

Some commenters express agreement with the comments submitted to the docket for this action by the Coalition for Sustainable Aviation and request that the EPA address the concerns expressed in those comments. Responses to the comments submitted by the Coalition for Sustainable Aviation can be found in Sections III.D and V.C of the final notice for this action, and in this section (i.e., Section 6) and Section 8.2.3 of the RTC document.

Section 7. Legal Authority and Procedural Topics

Section 7.1. The EPA's Authority Under CAA Section 231

Comment Number: EPA-HQ-OAR-2022-0389-0147-0001

Commenter Type: Private Citizen

Commenter: Elsa Keefe

Organization:

Excerpt Text:

The Clean Air Act (CAA) is a federal law regulating air emissions from stationary and mobile sources. It aims to address public health and welfare risks that may emerge from said sources. Under the impression that this law works to protect the public, lead pollution from aircraft emissions must be investigated and analyzed to determine its impact and any future course of action after a conclusion has been reached.

Comment Number: EPA-HQ-OAR-2022_0389-0664-0001

Commenter Type: Private Citizen

Commenter: Eric Baquero

Organization:

Excerpt Text:

There is still too much to be learned/discovered with the lead issue in general aviation fuel and the engines they power. Furthermore, the FAA needs to be the only regulatory agency dealing with the control of aviation in the U.S.

Comment Number: EPA-HQ-OAR-2022_0389-0665-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia. https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf. I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0683-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Chris Bailey

Organization:

Excerpt Text:

Ultimately, I agree wholeheartedly with the comments put forth by the Coalition for Sustainable Aviation. To have immediate positive effects, the FAA can institute the "dilution is the solution" method and alter run-up areas on impacted airports. The data supports that by doing this, aviation lead is indistinguishable from background levels, and therefore, not the true issue when discussing impacts to human welfare in the adjacent vicinity. In conclusion, the EPA proposed rule is an absolute over reach. The FAA currently has all the power and regulatory oversight to immediately resurrect the issue presented. In the event the proposed rule is enacted, there will be federal litigation (case in point when the U.S. Supreme Court ruled EPA over reach in West Virginia) and Congressional involvement to maintain the status quo until safe and reliable solutions can be developed for the long term.

Comment Number: EPA-HQ-OAR-2022-0389-0236-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The EPA has wrongly abdicated its public safety responsibilities to the FAA and set aside its safety guidelines in cases where aviation lead, noise and unsafe flight practices harm communities. Not only is the FAA not a public safety agency it has distinguished itself by continuous egregious disregard of communities in pursuit of its own interests.

Similarly, local entities (governments, universities, businesses) have taken advantage of the EPA's public safety abdication by doing whatever they want whenever they want wherever they want raking in profits again at the expense of local communities. If there are complaints to the FAA, EPA or local entities each knows that to deep six complaints one only need refer round and round or, if that fails, suppress, retaliate, harass, discriminate, make secret deals to appease select property owners, pronounce cases closed or just remain silent. It works.

In its comment instructions the EPA suggests that authors should consider where tradeoffs may be necessary when considering public safety versus industry. No. The way forward may be more challenging without tradeoffs but under no circumstances should public safety be considered expendable.

Comment Number: EPA-HQ-OAR-2022-0389-0131-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Airport Impact Relief, Inc.

Excerpt Text:

What is to comment about? Why isn't the agency moving fast against using this fuel when we have known about its negative effects on human health. A study was done in Los Angeles most recently to capture data about effects on the younger population underneath flight paths. This needs to be stopped immediately. To not demand the stoppage is criminal subjecting people to irreversible and long term negative impacts upon their health. This is your job to protect people from known health impacts.

Comment Number: EPA-HQ-OAR-2022-0389-0183-0005

Commenter Type: Private Citizen

Commenter: Sheetal Patel

Organization:

Excerpt Text:

The EPA should not wait on any further findings on lead air pollution which may or may not reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act. The EPA, WHO and CDC has abundant data on lead poisoning and long-lasting terrible effects of lead and how it effects the environment and human population. Lead should not be used in aviation fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0714-0001

Commenter Type: Private Citizen

Commenter: Ellie Lichti

Organization:

Excerpt Text:

I completely agree with the proposal to find the influence that lead air pollution has on public health and welfare. It would violate the mission of the EPA to not find the effects of such pollution, since it is anticipated to have significant health risks. There is absolutely no reason that such an evaluation, and establishment of findings, should not be conducted when it is well within the rights of Section 231 (a) (2) (A) of the Clean Air Act.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-034-0003

Commenter Type: Advocacy Organization

Commenter: Robert Germann

Organization: Citizens Against Gillespie's Expansion Low Flying Aircraft

Excerpt Text:

The EPA has tremendous power over these general aviation airports because it is federal grant money that allows these small general aviation airports to basically exist otherwise they wouldn't survive. And if anybody needs anymore information, we have a great environmental director called Gary Keller, named Gary Keller, and he already spoke so you are more than welcome to go to our website, you know, we always encourage that and you will get a lot more information than you heard today. And that's it.

Comment Number: EPA-HQ-OAR-2022-0389-0254-0001

Commenter Type: Private Citizen

Commenter: Robert James

Organization:

Excerpt Text:

This is my strong objection to the EPA overreaching it's authority, without any data or scientific information to back up their reasoning with the Avgas of today!

Please stand down!

FAA, please show some spine and stand up! Protect your rightful authority, or lose it!

Under the "Proposed Rule", the EPA claims authority under section 231(a)(2)(A) of the Clean Air Act to both "find that lead air pollution may reasonably be anticipated to endanger the public health and welfare" and additionally "to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonable be anticipated to endanger public health and welfare".

The fact is that leaded fuels used in Avgas today is substantially lower in harmful emissions now than what many of us remember in older automobiles and all but a very small amount of lead emissions has been eliminated. The AvGas of today accounts for approximately 470 tons/year of lead emissions, or less than ¼ of 1% of the lead emissions of the 70's.

In Conclusion; this proposal affects Pilots and Aviation fuel bases worldwide.

It is documented, and should be recognized that the biggest endangerment that the public has ever faced from lead emissions has already been eliminated.

For the current EPA Administrator to “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” is irresponsible and false.

Comment Number: EPA-HQ-OAR-2022_0389-0650-0006

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. o The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia. https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf o I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. o I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0663-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Kay Frizzell

Organization:

Excerpt Text:

These remedies are contained in aforementioned CSA comments. These would be safe and cost effective. Lead emissions from these type of aircraft engines are indistinguishable from background levels of lead. Therefore, aircraft emissions from these type of aircraft engines are not endangering the public. The Run Up area used to warm up our engines so that they are safe to fly would be the only place where a higher amount of lead would be emitted into the environment. And that emission would quickly be diluted in a very short distance. This is a easy solution. Just make sure that the Run Up area is moved from property boundaries that are anywhere near the public! There is no need for additional oversight by another Federal Agency. The FAA has all the authority necessary to manage aircraft emissions. If Congress intended for EPA to regulate aircraft they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. I agree with the common sense comments submitted by the Coalition for Sustainable Aviation (CSA) and I am respectively requesting that EPA address the concerns expressed by CSA. Thank you very much. Kay M Frizzell

Comment Number: EPA-HQ-OAR-2022_0389-0665-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia. https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf. I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed. Any disruption to General Aviation has an immediate and lasting impact to Commercial Aviation. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia.

Comment Number: EPA-HQ-OAR-2022_0389-0705-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Rob Reece

Organization:

Excerpt Text:

Any disruption to General Aviation has an immediate and lasting impact to Commercial Aviation. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia.

Comment Number: EPA-HQ-OAR-2022-0389-0248-0001

Commenter Type: Private Citizen

Commenter: Andrew Andraka

Organization:

Excerpt Text:

This proposal is beyond the jurisdiction of the EPA, as all forms of aviation are regulated closely by the Federal Aviation Administration.

Comment Number: EPA-HQ-OAR-2022-0389-0248-0003

Commenter Type: Private Citizen

Commenter: Andrew Andraka

Organization:

Excerpt Text:

The EPA needs to stay in its own lane and focus on actual threats to our environment rather than dabble in a fragile system it cannot even begin to understand. The FAA is the administrative and regulatory branch for a reason. Let them do their job.

Comment Number: EPA-HQ-OAR-2022_0389-0712-0001

Commenter Type: Private Citizen

Commenter: DAN DREW

Organization:

Excerpt Text:

In reading these comments it strikes me as generally well meaning but very uninformed as to the true causes of this supposed problem. Unleaded fuel has been finally approved but was resisted by the FAA and more importantly the fuel lobby. Avgas is a small niche of the overall fuel industry. The FAA has put restrictions on the development of unleaded fuel with onerous requirements that the company developing had to delay many years the rollout. Higher powered piston engine aircraft cannot use more modern and efficient ignition systems due to the FAA's belt and suspenders approach to progress. You want unleaded fuel? Ask the FAA why they hindered it for 12 years? Letting the EPA regulate this issue will only make it worse. They are after all a government bureaucracy.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0022

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

To stave off a worsening crisis, the EPA must finalize this endangerment finding in accordance with promised timelines and take expedient action to eliminate this harmful source of lead air pollution. The EPA has announced plans to issue any final endangerment finding in 2023. The Agency should adhere to this timeline and finalize the leaded avgas endangerment finding as early in 2023 as possible. Previous regulatory timelines indicate that a finalized finding in the first half of 2023 is more than feasible, and it should certainly be so in this case given the irrefutable and extensive evidence establishing each of the endangerment finding factors. When the EPA undertook an endangerment finding rulemaking for greenhouse gases, it issued the final finding just over six months after the end of the 60-day comment period – during which over 380,000 public comments were submitted.[Footnote 116: U.S. EPA, Timeline of EPA's Endangerment Finding, U.S. Env't Protection Agency, available at <https://www.epa.gov/climate-change/greenhouse-gas-endangerment-finding-timeline>.] This rulemaking is very unlikely to receive comparable public participation, given the highly charged nature of greenhouse gas emissions regulation in the wake of the Supreme Court's decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007). There is no reason that the EPA should not significantly outpace that timeline and finalize the endangerment finding months earlier than July 2023.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

EPA does not have the legal authority to implement the “Proposed Rule”

Fundamental to this claim is the fact that Congress excluded aircraft from the Clean Air Act of 1970, which is why airplanes do not have catalytic converters, or any other mandated modifications that our modern day automobiles do have. Lead has not been removed from aviation fuel, as it was for gasoline used by the motoring public during that same period, for good reason. The Clean Air Act provides for this important exclusion in the definition of “Transportation Fuel” 40CFR section 80.1401: “Transportation Fuel means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels).”

40CFR section 85.1703 defines Motor Vehicles, and excludes aircraft by way of, “the vehicle exhibits features which render its use on a street or highway unsafe, impractical, or highly unlikely, such features including, but not being limited to, tracked road contact means, an inordinate size....”

Congress has taken no action to modify these definitions to include Aircraft or the associated fuel. Neither the amended CAA of 1977 nor the amended CAA of 1990 changed the definitions of Motor Vehicles or Transportation Fuels.

[Underlined: Further to the matter of over-reach.] Under the “Proposed Rule” EPA claims authority under section 231(a)(2)(A) of the Clean Air Act to both “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” and additionally “to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonable be anticipated to endanger public health and welfare”. Further, EPA points to findings for Green House Gases (GHGs) under section 202(a) supportive of its proposed authority. Section 202(a)(1) states “The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of [Bold: new motor vehicles or new motor vehicle engines], which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” (emphasis added)

We point first to the fact that none of the existing 222,600+ piston engine aircraft could be defined as a “new motor vehicle” or having “new motor vehicle engines”. More importantly, aircraft are excluded from the definition of “motor vehicle” provided for in the CAA 40CFR section 85.1703

A plain reading of the regulations clearly illustrates that Aircraft are not “Motor Vehicles” and that Aviation Gasoline is not “Transportation Fuel”. Respectfully, we do not see the necessary legal authority for EPA to proceed with or implement the “Proposed Rule” in an attempt to regulate Aviation Gasoline under either section 231(a) or section 202(a)

Comment Number: EPA-HQ-OAR-2022-0389-0206-0012

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

A plain reading of the CAA illustrates that Aircraft are not Motor Vehicles and EPA would not have the authority to regulate Aircraft or the fuel used in Aircraft. Even though we do not support EPA mandating fuel by regulations, we do share similar concerns of lead emissions from aircraft. We are convinced that

there is a common-sense solution that can be immediately implemented in those areas where excessive lead emissions exist. We contend that if lead emissions from aircraft are undetectable from background levels of lead, then it stands to reason that there can be no potential for endangerment outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE). Provided that this premise is sound, then it simply is not necessary for EPA to regulate the entire fleet of piston engine aircraft in order to meet its objective of safeguarding the public where it can be “reasonably anticipated that leaded aircraft fuel contributes to air pollution that would endanger public health and welfare”. We request that EPA instead focus its resources and energy along with FAA to assure Environmental Justice expeditiously by considering and implementing the CODALE approach at sensitive airports.

Response to Comments Regarding EPA’s Authority Under CAA Section 231

In this response, the EPA is focusing on addressing comments related to its legal authority under section 231 of the CAA. To the extent that these commenters raise other issues, those issues are addressed elsewhere in this RTC or in the final notice for this action. Additionally, the EPA responds to certain comments regarding the Agency’s legal authority under CAA Section 231 in Section III.D of the final notice, including comments with respect to whether aircraft are included in the provisions of the CAA addressing mobile sources and the EPA’s authority regarding aircraft, aircraft emissions standards, or leaded aviation fuels under the CAA. We respond to additional comments related to EPA’s legal authority here.

As explained more fully in Section III of the final notice, the EPA agrees with the comments supporting the position that the CAA authorizes the EPA to make endangerment and cause or contribute findings with regard to aircraft lead emissions under 231(a)(2)(A). Insofar as these comments suggest that it is appropriate in this action to investigate and analyze the public health and welfare risks from lead air pollution under the CAA, and whether aircraft lead emissions cause or contribute to such pollution, the EPA also agrees for reasons described in Section III of the final notice. Further, some comments appear to simply mirror the EPA’s description of its authority under CAA section 231 in the proposal, without suggesting any changes to or disagreement with the EPA’s interpretation. The EPA acknowledges these supportive comments and notes that, for the reasons described in Section III of the final action, after consideration of the public comments on this topic, it is abiding by the same interpretation of its legal authority in finalizing the findings. Accordingly, these comments require no further response.

Several comments assert that the EPA does not have the legal authority to proceed with or implement this action. Some comments state that the proposal overreaches the EPA’s authority. Some comments assert that if Congress intended for EPA to regulate aircraft, they would have included that authority in the CAA. Some of these comments point to the FAA’s authority, suggesting that it needs to be the only regulatory agency dealing with the control of aviation in the U.S. or suggesting that FAA has all the authority necessary to manage aircraft emissions, such that oversight by the EPA is not needed. One commenter states that the EPA is overreaching its authority without any data or scientific information to back up its reasoning. The EPA disagrees with the comments that it lacks legal authority to proceed with or implement this action, or that it is overreaching its authority in making these findings. As described more fully in Section III.A of the final notice for this action, section 231(a)(2)(A) of the CAA authorizes the EPA to make these findings, providing that the “Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.” Moreover, although the EPA neither proposed, requested comment on, nor is establishing emission standards for aircraft in this action and thus any comment relevant to such standards is beyond the scope of this action, we note that this provision further expressly authorizes the EPA to establish such standards, consistent with the provisions of section 231 of the CAA, as described further in Section III.C of the final notice for this action. Furthermore, as discussed

in Section III of the final notice, in sections 231 and 232 of the CAA, Congress entrusted certain authorities and duties to the EPA with respect to regulating emissions of air pollutants from aircraft engines, and others to the U.S. Department of Transportation (DOT). While the EPA acknowledges the FAA's role in regulating aircraft, that does not abrogate the fact that Congress provided the EPA with particular authorities under CAA section 231, including the authority for this action. The comments challenging the EPA's authority for this action rely on general assertions but do not engage with the text of the statutory provisions cited in the proposal, including particularly CAA section 231, nor do they explain why they disagree with the EPA's interpretation of CAA section 231. Further, to the extent that these comments intend to suggest that the EPA's action somehow infringes on the FAA's authority, such a suggestion is contrary to section 231 of the CAA. Furthermore, section 232 of the CAA and 49 U.S.C. 44714 make plain that this action is a predicate to the exercise of certain authorities by the FAA and will lead to certain duties for both the EPA and the FAA, as discussed in Section III.C and the Supplementary Information Section of the final notice. In response to the comment asserting that the EPA has not provided any data or scientific information to back up its reasoning, we disagree; the scientific information and data supporting the endangerment finding is summarized in Section IV of the final notice, while that for the cause or contribute finding is in Section V of the final notice. To the extent that these comments are aimed at potential future actions beyond the findings described in the final notice, they are beyond the scope of this action and thus require no further response.

One commenter suggests that the EPA has tremendous power over general aviation airports because federal grant money allows these small general aviation airports to exist. In response, we note that the EPA does not have authority over general aviation airport operations and does not administer federal grant money for the planning and development of public-use airports. In addition, this comment is beyond the scope of this action, which does not relate to the EPA's administration of any federal grant money, and thus requires no further response. We further note that there are federal grants that support airport operations that are administered by the FAA, but the comment does not explain how, if at all, the proposed action would affect such grants. Thus, no further response is needed.

With respect to comments on this timing of this action, one commenter stated that there is still too much to be learned or discovered with the lead issue in general aviation fuel and the engines they power, while other comments stated the EPA should not wait on making the findings, pointing to the abundant data available on the effects of lead on the environment and on the human population. For the reasons described in Sections IV and V of the final notice, the EPA agrees with the comment that there is sufficient information available to finalize these findings now and that there is no need to wait until additional information is learned or discovered. In response to the comment suggesting that the Agency should finalize the endangerment finding as early in 2023 as possible and should be able to finalize it months earlier than July 2023, the EPA notes that it is working diligently to finalize the findings, including to consider the volume of public comments submitted, and that it will take longer to complete the process than the commenter anticipates. We further note that CAA section 231 does not establish any date certain deadline to issue final findings.

In response to the commenter who states that the EPA had issued instructions suggesting that comment authors "should consider where tradeoffs may be necessary when considering public safety versus industry," we note that the EPA did not supply such instructions and we suggest that the commenter might have misinterpreted the "Tips for Effective comments" that the EPA provides (at <https://www.epa.gov/dockets/commenting-epa-dockets>) which, among a list of nine tips for effective comments, includes "Address trade-offs and opposing views." This comment further suggests that the EPA has abdicated its public safety responsibilities to the FAA and set aside its safety guidelines in cases where aviation lead, noise and unsafe flight practices harm communities. The EPA notes that the considerations and rationale supporting the findings related to lead from covered aircraft are described in Sections IV and V of the final notice. Considerations of noise and safety in the context of aircraft emissions standards rulemaking are briefly described in Sections III.C and D of the final notice, but

comments related to such considerations are beyond the scope of this action and require no further response, as the Agency is not proposing or finalizing any such standards in this action.

As noted above, the EPA is responding to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses to comments related to the EPA's finding that lead air pollution is reasonably anticipated to endanger public health and welfare, please see Section 5 of this RTC document. For responses to comments related to the EPA's cause or contribute finding, please see Section 6 of this RTC document, as well as Section V.C of the final notice for this action. The EPA addresses comments comparing the amount leaded fuel used in avgas today to older automobiles in Section 6.2.1 of this RTC document. The EPA responds to commenters who argue that runup areas should be moved away from surrounding communities to dilute and, therefore, solve the issue of elevated lead concentrations from covered aircraft in Sections 6.2.2 and 6.2.3 of this document. The EPA further addresses comments regarding the legal framework for this action in Section 7.2 of this document, to its authority to address leaded aviation fuel in Section 7.3 of this document, and to comments regarding aircraft engine emissions standards in Section 7.4 of this document. Responses to comments concerning FAA are located in Section 8.3.

Section 7.2 The Legal Framework for Evaluating Endangerment and Cause/Contribute Findings

Comment Number: EPA-HQ-OAR-2022-0389-0268-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

I. Legal Standards

The CAA requires EPA to issue proposed emission standards whenever it determines that aircraft emissions “cause[], or contribute[] to, air pollution which may reasonably be anticipated to endanger public health or welfare.” [Footnote 31: 42 U.S.C. (Section) 7571(a)(2)(A).] This determination—often referred to as an endangerment finding—requires two showings: first, that lead air pollution as a whole may reasonably be anticipated to endanger public health or welfare; [Footnote 32: For the purposes of the CAA, “[a]ll language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.” 42 U.S.C. (Section) 7602(h).] and second, that emissions from the use of leaded avgas in piston-engine aircraft cause or contribute to this harmful air pollution. [Footnote 33: See 75 Fed. Reg. at 22,444–45 (explaining the two parts of the endangerment finding test); cf. *Coal. for Responsible Regul., Inc. v. EPA*, 684 F.3d 102, 117 (D.C. Cir. 2012) (explaining that an analogous provision of the CAA, (Section) 202(a)(1), “requires EPA to answer only two questions: whether particular ‘air pollution’ . . . ‘may reasonably be anticipated to endanger public health or welfare,’ and whether motor-vehicle emissions ‘cause, or contribute to’ that endangerment”), *aff’d in part, rev’d in part sub nom. Util. Air Regul. Grp. v. EPA*, 573 U.S. 302 (2014).] In evaluating whether there is a sufficient showing to satisfy each factor, EPA must rely on its scientific judgment of the risks posed by pollution emissions. [Footnote 34: See *Coal. for Responsible Regul.*, 684 F.3d at 117–18; *Massachusetts v. EPA*, 549 U.S. 497, 533–34 (2007).]

In its Proposed Endangerment Finding, EPA explains that it “is using the same approach of applying a two-part test under section 231(a)(2)(A) as described in the [final greenhouse gas findings under section 231 of the CAA in 2016] and is relying on the same interpretations supporting that approach.” [Footnote 35: 87 Fed. Reg. at 62,773.] As EPA points out, this approach was used in the findings for greenhouse gases under section 202(a) of the CAA, “which [were] affirmed by the U.S. Court of Appeals for the D.C. Circuit in 2012.” [Footnote 36: *Id.* (citing *Coal. for Responsible Regul.*, 684 F.3d 102).] Petitioners agree that this approach is the appropriate one to use in evaluating whether lead emissions from piston-engine aircraft cause or contribute to air pollution that may reasonably be anticipated to harm the public health or welfare within the meaning of section 231(a)(2)(A) of the CAA.

As EPA has recognized, the first prong of the endangerment finding is met whenever the air pollution at issue is reasonably anticipated to endanger public health or welfare, regardless of the source of that pollution. [Footnote 37: See *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496, 66,506 (Dec. 15, 2009) (interpreting parallel CAA provision relevant to motor vehicles to mean that “the Administrator is to consider the cumulative impact of [all] sources of a pollutant in assessing the risks from air pollution, and is not to look only at the risks attributable to a single source or class of sources”); see also 75 Fed. Reg. at 22,444 (referring to recent EPA notices for greenhouse gases setting forth the analytical and legal framework for endangerment findings).] In making a determination as to whether a particular pollutant is reasonably anticipated to endanger public health or welfare, EPA has articulated five principles to guide its analysis.

The Administrator:

- (1) must consider both current and future risks of harm;
- (2) “is to exercise judgment by weighing risks, assessing potential harms, and making reasonable projections of future trends and possibilities,” which entails a balancing of the likelihood and severity of effects; [Footnote 38: *Finding That Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution That May Reasonably be Anticipated to Endanger Public Health and Welfare*, 81 Fed. Reg. 54,422, 54,434 (Aug. 15, 2016); 74 Fed. Reg. at 66,505.]
- (3) may make decisions while recognizing uncertainties or limitations of available data or information;
- (4) is to consider the “cumulative impact” of sources of a pollutant in assessing the risks from air pollution rather than the risks attributable only to a single class or source of classes and is not to consider the effect of emissions reductions from standards that may result from the instant rulemaking; [Footnote 39: 81 Fed. Reg. at 54,435; 74 Fed. Reg. 66,506.] and must consider the risks to all parts of the population, including those who are at greater risk due to, for example, increased susceptibility to adverse health and welfare effects and thus may take into account “vulnerable subpopulations” that are especially at risk. [Footnote 40: 81 Fed. Reg. at 54,435; 74 Fed. Reg. 66,506; see also 87 Fed. Reg. 62,773–74.]

To meet the second prong of the endangerment finding, the Administrator “need not find that emissions from any one sector or group of sources are the sole or even the major part of an air pollution problem.” [Footnote 41: 74 Fed. Reg. at 66,506; 75 Fed. Reg. at 22,445.] As EPA has explained, “Congress . . . authorized regulatory controls to address air pollution even if the air pollution problem results from a wide variety of sources.” [Footnote 42: 75 Fed. Reg. at 22,445.] Thus, a “cause or contribute” finding for a particular source of pollution “does not require ‘significant’ contribution” from that source. [Footnote 43: 74 Fed. Reg. at 66,506 (“[T]he statutory language in CAA section 202(a) does not contain a modifier on its use of the term contribute. Unlike other CAA provisions, it does not require a ‘significant’ contribution.”); see also *Bluewater Network v. EPA*, 370 F.3d 1, 14 (D.C. Cir. 2004) (explaining that the CAA’s use of the term “significant” to modify the contribution required in one provision but not another, “indicates that Congress did not intend to require a finding of ‘significant contribution’ for” vehicles covered by the latter provision); 81 Fed. Reg. at 54,435 (“The use of the term ‘contribute’ clearly indicates that such emissions need not be the sole or major cause of the pollution. In addition, the absence of the term ‘significantly’ or any other word that modifies ‘contribute’ shows that the EPA need not find that contributing emissions cross a minimum percentage- or mass-based threshold to be cognizable.”).]

Though not necessary for the finding, in this instance, the emissions from piston-engine aircraft do in fact significantly contribute to lead air pollution.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0003

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The Proposal discusses the two-part inquiry under section 231(a) of the Clean Air Act. 42 U.S.C. [Section] 7571(a). The first step requires EPA to determine that air pollution—and a specific air pollutant—reasonably endangers public health or welfare. The second step is for EPA to make a finding that a particular class or classes of aircraft engines emits a pollutant that causes or contributes to that air pollution. In the Proposal, EPA addresses both the “endangerment” and “cause or contribute” prongs of the Clean Air Act. Ultimately, EPA proposes to find that (i) “lead air pollution may reasonably be anticipated to endanger the public health and welfare” and that (ii) engine emissions of lead from certain piston-engine aircraft operating with leaded fuel “cause or contribute” to that air pollution. Any final action by EPA on the Proposal must take into account the requirements of section 231, consider all relevant information, and take into account the overall regulatory landscape that includes both the lead NAAQS and FAA oversight of aircraft certification, including fuel use. In addition, the transition to lead-free fuels should occur within the confines of aviation safety.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0009

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

In its Proposed Endangerment Finding, EPA recites many of the dangers of lead exposure, but it does not expressly consider how these dangers fit into the legal framework it is ostensibly applying. EPA explains that it is using the same approach as it used in its final greenhouse gas findings in 2016, but it does not explain how the facts it recites relate to any of the five principles it laid out in that rule with respect to endangerment and set forth above. [Footnote 55: See 87 Fed. Reg. at 62,773–74.] Petitioners agree that consideration of all five principles articulated in the 2016 final greenhouse gas emissions endangerment finding support the conclusion that lead air pollution is reasonably anticipated to harm the public health and welfare. In its final endangerment finding, however, EPA should be explicit in its consideration of the principles and should expressly discuss at least two of the principles that are most relevant here: (1) that “vulnerable subpopulations” such as children, who may suffer from neurodevelopmental harm even at very low blood lead levels, are especially at risk from lead air pollution; [Footnote 56: EPA explains that its Policy on Children’s Health applies and that it “considered lead exposure risks to children as part of this proposed endangerment finding under CAA section 231(a)(2)(A).” 87 Fed. Reg. at 62,781. However, EPA should be explicit that the exposure risks to children support the endangerment prong of its finding under the framework used in the 2009 and 2016 findings and approved by the D.C Circuit in *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012).] and (2) that there are cumulative impacts of multiple sources of lead exposure. [Footnote 57: In this comment letter, Petitioners refer to the impacts resulting exposures to lead from various sources as “cumulative impacts,” mirroring the language

that EPA used in articulating the fourth principle, which directs the Administrator to “consider the cumulative impact of sources of a pollutant in assessing the risks from air pollution.” 81 Fed. Reg. at 54,435.] Each of these points support a positive endangerment finding and swift action to ban the use of leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0505-0001

Commenter Type: Private Citizen

Commenter: Kathryn Slye

Organization:

Excerpt Text:

The EPA should be VERY careful how it phrases and words it's findings and unequivocally clear about how it's findings can and cannot be used. For example, the EPAs careless use of the phrase "endanger the public welfare" in its Proposed Rule has already resulted in the small but incredibly vocal and aggressive group of anti-aviation activists using it as a sword against the small plane general aviation community. They are already using the EPAs language as a bootstrap to bring an onslaught of personal lawsuits against the pilots of small planes like little Cessnas and Piper Cubs, claiming the pilots are responsible for all of their medical woes and their future medical welfare based solely on the EPAs language in its Proposed Rule. They are using the EPAs language to close down small airports across the country, putting the communities who depend on them at risk both economically and for life safety reasons. For context, most of these same anti-aviation activists also believe commercial and military pilots are spraying mind control chemtrails on them and that the earth is flat. The EPA should not be endorsing this level of misinformation or encouraging these activists, many of whom are already using the EPAs language as justification to engage in acts of aggression against small pilots, putting their lives and their passengers' lives at risk. The EPA should make it clear that it's findings should never be used to create legal claims against small plane pilots or to justify any acts of aggression, vandalism, or violence against small plane pilots, and that it's goal is to facilitate and streamline a path to the further development, production, and fleet wide use of a safe, affordable, and effective unleaded fuel for small planes.

Comment Number: EPA-HQ-OAR-2022_0389-0647-0001

Commenter Type: Private Citizen

Commenter: Jeff Cordes

Organization:

Excerpt Text:

"May reasonably be anticipated" is not a good enough reason to upend the general aviation community. If you want to go this route, scientific studies must be conducted to prove this is an environmental issue. Also, there are no readily available engine/fuel alternatives due to bureaucratic red tape by the FAA. The reasonable thing to do would be to commission studies to see if this is an issue worth changing, and/or cut the red tape so automobile engines or new engine manufacturers can step up and replace the old leaded gas engines. Thank you.

Response to Comments Regarding the Legal Framework for Evaluating Endangerment and Cause/Contribute Findings

In this response, the EPA is focusing on addressing comments related to the legal framework for this action. To the extent that these commenters raise other issues, those issues are addressed elsewhere in this RTC or in the final notice for this action. Additionally, the EPA responds to certain comments regarding the Agency's legal authority under CAA Section 231 in Section III.D of the final notice, including comments with respect to whether aircraft are included in the provisions of the CAA addressing mobile sources and the EPA's authority regarding aircraft, aircraft emissions standards, or leaded aviation fuels under the CAA.

Some commenters restate aspects of the EPA's proposed approach to these findings, such as the use of a two-step approach to the proposed endangerment and cause or contribute findings or principles that inform the EPA's consideration of the endangerment and cause or contribute analysis. Some of these commenters explicitly agree with the aspects of the legal framework that they cite, such as (1) the commenters stating that they agree that it is appropriate to use the same two-part test and underlying interpretations for these findings as was used for the 2016 greenhouse gas findings under CAA section 231 and the 2009 greenhouse gas findings under CAA section 202(a) and (2) the commenters stating that a cause or contribute finding for a particular source of pollution does not require significant contribution from that source. Others seem to implicitly agree with or accept the aspects of the framework they restate, as they do not criticize the approach or offer suggestions for a different approach. The EPA acknowledges these supportive comments and notes that, for the reasons described in Section III of the final action, after consideration of the public comments on this topic, it is using this legal framework in finalizing the findings. Accordingly, these comments require no further response.

With respect to the comment that states that the EPA should be explicit in its consideration of the same five principles that guided the Administrator's analysis in the 2016 Endangerment Findings and should expressly discuss at least two of the principles—"vulnerable subpopulations" such as children and cumulative impacts of multiple sources of lead exposure—we note that, as described in Section III.B of the final notice for this action, the EPA used the same approach in making scientific judgments regarding endangerment as it has previously described in the 2016 Findings. This comment expressly states that consideration of all five principles articulated in the 2016 endangerment finding support the conclusion that lead air pollution is reasonably anticipated to harm the public health and welfare. Thus, the EPA interprets this comment as requesting that the EPA include additional explanation to support the endangerment finding, rather than advocating for a different outcome. As described in Section 5.1 of this RTC document, while the EPA's analysis for this endangerment finding for lead air pollution was guided by the same five principles that guided the Administrator's analysis in the 2016 Findings, the EPA has discretion in how it applies those principles in explaining the grounds supporting a particular endangerment finding. As described in Section IV.A.2 of the final notice for this action and in Section 5.1 of this RTC document, in the scientific information that informs these findings, the EPA has identified factors that may increase the risk of health effects of lead exposure due to susceptibility and/or vulnerability. These are termed "at-risk" factors and as noted in Section IV.A.2, the 2013 Lead ISA determined that there is adequate evidence that several factors – including childhood – confer increased risk of lead-related health effects.¹ Similarly, as described in Section 5.1 of this RTC document, one of the five principles cited by the commenters is that "the Administrator is to consider the cumulative impact of sources of a pollutant in assessing the risks from air pollution, and is not to look only at the risks attributable to a single source or class of sources." (81 FR at 54435). The EPA explains in greater detail in Section 5.1 of this RTC document how it has considered a wide range of sources of lead in making the endangerment finding, consistent with this principle. For the reasons noted in Section 5.1 of this RTC, to the extent that the comment seeks a more detailed description of how the cumulative impact of lead from

¹ EPA (2013) ISA for Lead. Section 5.4. "Summary." p. 5-44. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

multiple sources informs the endangerment finding, the EPA does not think that such a description is necessary to support this endangerment finding. Similarly, to the extent that the comment seeks a more detailed description of how consideration of vulnerable subpopulations informs the endangerment finding, the EPA also does not think such a description is necessary in this case. The extensive and well-documented information about the public health and welfare impacts related to lead air pollution, as summarized in Section IV of the final notice, provides sufficient grounds to support the Administrator's judgment that, for purposes of CAA section 231(a)(2)(A), the lead air pollution may reasonably be anticipated to endanger the public health and welfare.

One commenter suggests that the EPA should be "careful how it phrases and words its findings and unequivocally clear about how it's findings can and cannot be used." The same commenter also claims that EPA's "careless use of the phrase 'endanger the public welfare' ... has already resulted in the small but incredibly vocal and aggressive group of anti-aviation activists using it as a sword against the small plane general aviation community." This comment further suggests that the EPA should not endorse certain types of misinformation the comment asserts that these activists believe and requests that the EPA make clear that its findings should never be used to create legal claims against small plane pilots or to justify any acts of aggression, vandalism, or violence against small plane pilots. In response, the EPA states that it does not condone acts of aggression, vandalism or violence and does not view the final findings as providing any basis for such acts. Similarly, nothing in the proposed or final findings endorses the types of misinformation that the comment identifies. However, while the EPA is endeavoring to communicate appropriately and clearly about these final findings, the Agency is not able to control how each individual member of the public may choose to refer to the findings, what inferences they may seek to draw from them, or what actions they may seek to take based on them. The EPA further notes that such actions by third parties are beyond the scope of this action.

Some of these comments seem to criticize the EPA's use of language that appears in section 231(a)(2)(A) of the CAA. For example, as noted in the prior paragraph, one comment suggests that EPA is "carelessly" using the phrase "endanger the public welfare," while another commenter states that the phrase, "[m]ay reasonably be anticipated," is not a good enough reason to upend the general aviation community, stating that "scientific studies must be conducted to prove this is an environmental issue." In response, the EPA notes that the phrase "may reasonably be anticipated to endanger public health or welfare" appears in the text of section 231(a)(2)(A) of the CAA, which provides authority for this action. It is completely appropriate for the EPA to reference and rely upon the applicable statutory text, as it has done in this action, even if some commenters disagree with the language that Congress chose to use in describing the EPA's authorities under section 231(a)(2)(A) of the CAA. Further, the EPA has explained how it interprets this language in Section III of the final notice for this action, and neither comment engages with those interpretations or rationale. This explanation includes a description in Section III.A of the final notice that the EPA interprets the phrase "may reasonably be anticipated" and the term "endanger" in section 231(a)(2)(A) to authorize the Administrator to act in conditions of uncertainty.² To the extent that these comments suggest that the EPA may not act under this provision until it has scientific studies to prove that there is an environmental issue, the EPA disagrees because this suggestion is inconsistent with the statutory language, which both contemplates that the EPA may make findings based on public health or welfare and in conditions of uncertainty, as described in Section III.A of the final notice, as well as in Section 5.2 of this RTC document.

One commenter stated that "[a]ny final action by EPA on the Proposal must take into account the requirements of section 231, consider all relevant information, and take into account the overall regulatory landscape that includes both the lead NAAQS and FAA oversight of aircraft certification, including fuel use." As described in the final notice and in this RTC document, the EPA responds that it has considered the requirements of section 231 of the CAA and the relevant information as appropriate,

² See *CRR*, 684 F.3d at 122 (internal citations omitted) (June 26, 2012).

including scientific information developed for prior reviews of the lead NAAQS and information related to exceedances or potential exceedances of the lead NAAQS. However, to the extent that this comment is suggesting that particular policy considerations, such as future actions that might be taken by FAA, be considered in making these findings, the EPA disagrees. As explained in Section III of the final notice and Section 5.2 of this RTC document, the EPA interprets the text of CAA section 231(a)(2)(A) to “require a ‘scientific judgment’ about the potential risks ... to public health or welfare – not policy discussions”³ and bringing such policy considerations about potential regulatory consequences into the determinations regarding the findings would “muddle the rather straightforward scientific judgment about whether there may be endangerment by throwing the potential impact of responding to the danger into the initial question.”⁴

As noted above, the EPA is responding to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses to comments related to the EPA’s finding that lead air pollution is reasonably anticipated to endanger public health and welfare, please see Section 5 of this RTC document. For responses to comments related to the EPA’s cause or contribute finding, please see Section 6 of this RTC document, as well as Section V.C of the final notice for this action. EPA responds to comments regarding its legal authority for this action in Section 7.1 of this RTC document, to comments regarding its authority to address leaded aviation fuel in Section 7.3 of this document, and to comments regarding aircraft engine emissions standards in Section 7.4 of this document.

Section 7.3 The EPA’s Authority Regarding Leaded Aviation Fuel

Comment Number: EPA-HQ-OAR-2022-0389-0227-0011

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

It is incumbent upon EPA not to come to premature conclusions and to follow the science and applicable statutory requirements during its consideration of the Proposal, and with respect to any related actions. EPA must also ensure a safe and orderly transition to unleaded aviation fuels. Many of the 220,000 piston engine airplanes and rotorcraft in the current fleet require high-octane 100LL fuel to fly safely. Putting the wrong fuel into an aircraft can cause catastrophic engine failure. Aircraft needing higher octane fuel to fly safely include those carrying out important missions -- such as search and rescue, disaster relief, and law enforcement. We must ensure that 100LL remains available at our nation’s airports until an appropriate transition to a viable replacement.

Comment Number: EPA-HQ-OAR-2022_0389-0676-0002

Commenter Type: Private Citizen

Commenter: Betty Solek

Organization:

³ *CRR*, 684 F.3d at 117-118 (quoting *Massachusetts v. E.P.A.*, 549 U.S. 497, 534 (2007)) (June 26, 2012).

⁴ *CRR*, 684 F.3d at 118 (quoting the 2009 Findings, 74 Fed. Reg. at 66,515) (June 26, 2012).

Excerpt Text:

Since the FAA has approved a lead free alternative fuel, why shouldn't this be the new standard? Is this more foot dragging on the part of FAA? We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. We do not need more studies or data - we need action to protect children, our health, and our environment now.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-006-0004

Commenter Type: Private Citizen

Commenter: Richard Offerman

Organization:

Excerpt Text:

We need to have an endangerment finding finalized so our community can work with our county supervisors to quickly ban the sale of leaded aviation fuel AVGAS at Buchanan.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

EPA does not have the legal authority to implement the “Proposed Rule”

Fundamental to this claim is the fact that Congress excluded aircraft from the Clean Air Act of 1970, which is why airplanes do not have catalytic converters, or any other mandated modifications that our modern day automobiles do have. Lead has not been removed from aviation fuel, as it was for gasoline used by the motoring public during that same period, for good reason. The Clean Air Act provides for this important exclusion in the definition of “Transportation Fuel” 40CFR section 80.1401: “Transportation Fuel means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels).”

40CFR section 85.1703 defines Motor Vehicles, and excludes aircraft by way of, “the vehicle exhibits features which render its use on a street or highway unsafe, impractical, or highly unlikely, such features including, but not being limited to, tracked road contact means, an inordinate size....”

Congress has taken no action to modify these definitions to include Aircraft or the associated fuel. Neither the amended CAA of 1977 nor the amended CAA of 1990 changed the definitions of Motor Vehicles or Transportation Fuels.

[Underlined: Further to the matter of over-reach.] Under the “Proposed Rule” EPA claims authority under section 231(a)(2)(A) of the Clean Air Act to both “find that lead air pollution may reasonably be anticipated to endanger the public health and welfare” and additionally “to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonable be anticipated to endanger public health and welfare”. Further, EPA points to findings for Green House Gases (GHGs) under section 202(a) supportive of its proposed authority. Section 202(a)(1) states “The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of [Bold: new

motor vehicles or new motor vehicle engines], which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” (emphasis added)

We point first to the fact that none of the existing 222,600+ piston engine aircraft could be defined as a “new motor vehicle” or having “new motor vehicle engines”. More importantly, aircraft are excluded from the definition of “motor vehicle” provided for in the CAA 40CFR section 85.1703

A plain reading of the regulations clearly illustrates that Aircraft are not “Motor Vehicles” and that Aviation Gasoline is not “Transportation Fuel”. Respectfully, we do not see the necessary legal authority for EPA to proceed with or implement the “Proposed Rule” in an attempt to regulate Aviation Gasoline under either section 231(a) or section 202(a)

Comment Number: EPA-HQ-OAR-2022-0389-0145-0003: Mixed/Other

Commenter Type: Trade Association

Commenter: Jim Coon

Organization: General Aviation Manufacturers Association, et al.

Excerpt Text:

This is a matter of safety. Many of the 220,000 piston engine airplanes and rotorcraft in the current fleet require higher-octane 100LL fuel to fly safely. Putting the wrong fuel into an aircraft can cause catastrophic engine failure. Aircraft needing higher octane fuel to fly safely include those carrying out important missions -- such as search and rescue, disaster relief, and law enforcement.

We need to ensure that 100LL remains at our nation's airports during this transition. Some government bodies, including Santa Clara County in California, have prematurely banned the higher-octane fuel needed by many aircraft to fly safely. This prohibition is not only irresponsible, it violates federal rules for airports that take federal funds for improvements.

The general aviation community remains committed to removing lead from aviation gasoline by the end of 2030 - and it may be sooner. But we cannot compromise the safe and efficient operation of the fleet, or economically destroy the United States general aviation transportation infrastructure by prematurely removing an essential fuel that many aircraft need.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

EPA must act to ban leaded aviation gasoline as part of a holistic solution to finish the fight against childhood lead poisoning. We strongly recommend EPA finalize the proposed endangerment finding as soon as possible and work with the Federal Aviation Administration (FAA) to phase out lead aviation gasoline. To that end, we also support the language in the recently adopted Fiscal Year 2023 Omnibus, which directs the FAA to prioritize the identification and testing of unleaded replacement fuels that are viable and to move forward expeditiously on a rulemaking triggered by EPA’s endangerment finding.

Comment Number: EPA-HQ-OAR-2022-0389-0263-0001

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles CA, Board of Supervisors

Excerpt Text:

We urge the United States Environmental Protection Agency (EPA) to adopt the finding it published on October 17, 2022, that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare (the Endangerment Finding).

Our Board approved a motion on January 10, 2023, urging the EPA in compliance with published requirements, to eliminate lead from aviation gasoline and supporting the EPA's strong endangerment finding on leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-030-0004

Commenter Type: Advocacy Organization

Commenter: Marcie Keever

Organization: Friends of the Earth

Excerpt Text:

EPA and FAA should prioritize making unleaded AVGAS available at the highest moving airports and the airports with the highest number of children, low wealth people and people of color living nearby. The EPA has stated there is no safe level of lead emissions from aircraft since at least 2010 when it issued the advanced notice of rulemaking for lead in aviation. It must move with all speed to finalize this endangerment finding and move towards getting the lead out immediately. With five million people including more than 360,000 children under the age of children five, living within 500 meters of these airports and living with elevated blood lead levels are the ongoing of daily threat of elevated blood lead levels and other illness deserve no less. It is way past time we give them this.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0005

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

While EPA intends to improve the environment by eliminating lead in avgas, prohibiting lead in avgas before comparatively priced substitute fuel for widespread use is developed would create unintended consequences that would disproportionately impact rural Alaska and Alaska Natives. Most Alaskan villages are not connected to the road system, and piston driven aircraft using IOOLL fuel provide basic community access. Most of the people in Alaska villages are Alaska Natives and are members of federally recognized tribes. Alaska has 40 percent of all federally recognized tribes, and it is important to recognize the critical role IOOLL fuel plays in the transportation system for Alaska villages and their related Alaska Native tribes.

Because the federal government has a unique relationship with indigenous peoples, the federal trust responsibility to Alaska Natives may be violated by EPA's rulemaking, unless mitigating actions are taken to ensure basic community access is available to rural Alaskan villages and their tribal members. This is important considering The Presidential Memorandum of January 26, 2021 (Tribal Consultation and

Strengthening Nation-to-Nation Relationships), which re-affirms Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

Comment Number: EPA-HQ-OAR-2022-0389-0226-0005

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: General Aviation Modifications, Inc.

Excerpt Text:

With this background, and for these reasons, my company and I, with a background that includes unequalled subject matter expertise, make the following recommendations to the EPA:

- 1) Any regulatory action to ban the use of existing 100LL aviation gasoline should be timed, coordinated, and focused based on the expansion of the industrial production capability to produce, transport, and deliver G100UL avgas to the relevant local airports.
- 2) GAMI and the industry should be allowed to begin an orderly process, which includes delivering initial smaller (rail car quantities) of G100UL avgas to targeted airport communities in California. (Be aware, we have already been contacted by the California Department of Transportation, who has, on the direct instructions of the Governor of California, reached out to us to offer the assistance of the State of California to accelerate the deployment of G100UL avgas in that state.)
 - a. This plan to begin deliveries to these targeted airport communities was reviewed and agreed to by the FAA as part of their obligatory regulatory oversight for assuring ongoing quality control of all products and consumables used in aviation. Note: Over the last two and one-half years, we have had exceptional cooperation and the fully focused attention of the senior members of FAA management and the various levels of their engineering staff to create a plan and facilitate the earliest possible deployment of G100UL avgas to replace 100LL.
 - b. We are hesitant to place a specific time line and dated milestones for this process, due, largely, to the exceptional level of disruption that has taken place within the supply chain infrastructure over the last several years. In addition, changing highly technical processes within the fence of the existing major petroleum refining and blending facilities is a cumbersome and time-consuming process that must, for worker safety reasons, only be executed with careful planning. The small volume of avgas, only 0.15% of the gasoline pool, does not provide sufficient economics to rapidly reconfigure refineries to begin unleaded avgas production.
 - c. Regardless, we do share with you that it is our goal and realistic expectation that we will be able to begin initial deliveries of railroad car quantities of G100UL avgas to the selected communities in California during the next six to eight months. After that process has begun, we anticipate that, over the following year we will be able to greatly expand that capacity to cover most of California and other western states and to then begin to expand the process across the United States.
- 3) It would help, enormously, if the EPA could arrange to assist and to facilitate this process through a variety of useful incentives that could be provided by the federal and state governments. We stand ready to meet with the appropriate personnel within the EPA to discuss the details as to how that could be readily accomplished.

Comment Number: EPA-HQ-OAR-2022-0389-0241-0005

Commenter Type: Local Government

Commenter:

Organization: County of Los Angeles, CA, Board of Supervisors

Excerpt Text:

The Federal Aviation Administration and the aviation and energy industries have undertaken efforts to transition piston-engine aircraft to unleaded gasoline, primarily through the recently formed Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative. However, to protect most effectively the public health, and especially the health of those living and working near airports, the EPA must set mandatory, enforceable timelines for these industries to phase lead out of aviation gasoline like it was phased out of the automotive industry five decades ago. The Endangerment Finding constitutes a fundamental step toward establishing these standards.

Comment Number: EPA-HQ-OAR-2022_0389-0680-0001

Commenter Type: Private Citizen

Commenter: Bethany Rondeau

Organization:

Excerpt Text:

I am reaching out today as a concerned citizen and mother for the proposed regulation that harms my child's opportunity to continue in our family tradition of Small Craft General Aviation. As a family that are members of the Cow Creek Band of Umpqua Tribe of Indians we are minorities in aviation, we have been working diligently to make aviation more equitable and inclusive and have been received with open arms by the Small Craft General Aviation community. This regulation that is being proposed will harm minorities such as ourselves by potentially grounding airplanes in the aviation community. We have come a long way in lead emissions, today we have 425 times less lead emissions than in the 1970s. I believe there is a way to continue reducing lead emissions in a way that doesn't harm aviation freedoms, the Coalition for Sustainable Aviation (CSA) offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. I am requesting that EPA address the concerns expressed in their submission.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0009

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

Case History – Automotive Gasoline Lead Phaseout

The removal of lead from automotive gasoline provides for a good case study and should not be ignored when considering the possibility of eliminating TEL from AvGas. Over the course of approximately 40 years, beginning in 1973 EPA worked with industry stakeholders to successfully reduce lead emission by over 99%, a monumental effort that people from every walk of life have benefitted. This feat was accomplished by working with both gasoline producers and automobile manufactures, and utilizing an approach that phased lead out over a period of time. Integral to the phase-out was a lead credit program where refiners of gasoline were able to undertake the multi-billion dollar capital expenditures necessary to reconfigure production facilities for the new gasoline formulations.

[Underlined: New gasoline formulations need to go hand-in-hand with engine technology changes in order to maintain aircraft safety.] Reflecting on that period of time, beginning in 1973, when the process for lead phase out began, it should be recognized that there were two key elements to achieving the goal of a lead-free fuel formulation that had lower octane value. The need for new engine technology went hand-in-hand with new gasoline formulations. By developing advanced technology, the center of which

was fuel injected engines with computer controlled electronic ignition systems, a lower octane fuel could be utilized without causing internal damage to the new model automobile engines.

[Underlined: An accelerated implementation of lead-free aviation fuel could adversely affect aviation safety.] When it comes to the proposed lead removal from AvGas, many commenters appear to be in favor of a much more aggressive schedule, where by lead would be completely removed from AvGas no later than the year 2030, less than 7 years from even the most accelerated rule making process that EPA could undertake.

Case History – Low Sulfur Diesel Implementation

One of the most applicable and enlightening experience with implementation of a new fuel regulation would be that of Low Sulfur Diesel (LSD). In 1993 EPA began regulating sulfur in diesel, starting first with on-road diesel fuel and a new maximum allowed level of 500 ppm, down from previously acceptable levels as high as 5000 ppm. To address the growing concern over acid rain and to further reduce particulate matter, EPA promulgated the LSD rule. As a result the refining industry undertook an extensive and costly effort to remove sulfur from refinery intermediate streams through a technology known as hydrotreating. Following years of capital expenditures and the resulting plant modifications, refiners were prepared and brought these units up and online, displacing the higher sulfur diesel in the pipeline and terminals with the new LSD by the effective date of this new regulation. All in all the delivery of the new LSD to the consumer was performed as mandated and done on schedule. This was because the refiners had the time to make the costly modifications to their processes well ahead of the deadline.

Unlike the phase out of lead in gasoline over time, the sulfur specifications for on-road diesel were essentially changed overnight. What was not anticipated was the massive number of engine failures that would occur as a direct result of this newly mandated low-sulfur diesel fuel. Thousands of diesel-powered automobiles and trucks, including ambulances and service vehicles, along with diesel driven construction equipment as well as farming equipment were shutting down across the United States. Within days it was determined that the failures were directly related to the new Low Sulfur Diesel specification. A loss in lubricity resulting from the lower sulfur content in the new diesel fuel was the root cause of these failures. The point of failure was within the fuel delivery system, at the fuel pumps of the failed diesel-powered vehicle. Once the fuel pumps began failing, diesel engines abruptly stopped operating and the diesel-powered vehicle came to rest where it was. Because of the nature of land vehicles, an engine failure does not necessary result in extensive vehicular damage and is not necessarily a life-threatening event. However, in the case of an aircraft engine failure, extensive damage to the aircraft itself, to the pilot and passengers, and to persons and property on the ground is very likely to occur, and there exists an unacceptable chance of fatalities.

CSA opposes a mandatory fuel change that would be essentially overnight. Such an impact would go far beyond the unacceptable safety risk, such an implementation would almost certainly ground the entire GA fleet. If a similar event to that experienced with low sulfur diesel implementation were to occur with aviation fuel, FAA would have no choice but to issue an Airman's Directive (AD) and ground all "Covered Aircraft" until a safe solution could be developed and implemented. Such an AD would come at a tremendous cost to the general aviation community, both in the way of capital expenditures for hastened engine modifications, and in the way of lost revenue for those operating piston engine aircraft for air taxi, freight, flight schools, or other business endeavors. Such engine modifications to accommodate an unanticipated chemical property (such as lubricity with LSD) resulting from lead-free aviation fuel would be unproven and carry their own safety risk.

[Underlined: Implementation of lead-free aviation fuel requires technology changes to aviation engines, which takes time.] Reflecting again on the phase out of lead from automobile gasoline, the second critical component to its success was the development of advanced engine technology. Due to the lower octane value of the resulting unleaded fuel, new engines had to be developed. Only through the advancement of

computer controlled timing and electronic fuel injection was it possible to reformulate gasoline and remove TEL from the blends.

Aircraft engines today are, for all intents and purposes, operating with technology that was developed nearly 100 years ago. In fact, many of the aircraft that would fall under the proposed “Covered Aircraft” definition in the Proposed Rule have no electrical systems at all. These airplanes are literally started by hand, similar to how one would start a lawn mower with a pull rope. It is important to understand that virtually every “Covered Aircraft” operates with two self-contained ignition systems known as magnetos. The use of dual magnetos, and the accompanying dual spark plugs in each cylinder, provide pilots with the necessary redundancy that should one ignition system fail in flight, that the second will keep the airplane running and airborne until it can safely land at an airport. Once safely on the ground the necessary repairs to the failed ignition system can then be made. Similar scenarios exist, where for example an alternator fails in flight and causes the battery to completely discharge. In the case of magnetos, the aircraft engine continues to run and the airplane can be flown safely to an airport for diagnosis and repairs. The computer-based ignition systems of today’s automobiles require a functioning electrical system to continue uninterrupted operations.

Unlike drivers of automobiles, pilots cannot simply pull their plane to the side of the road and check under the hood should their engine quit running. As many flight instructors are fond of saying “Takeoffs are Optional, Landings are Mandatory”. In-flight safety emphasizes the need for rigorous pre-flight procedures.

[Underlined: Safety is paramount to aircraft operations, which is why pilots go through such an extensive pre-flight check prior to taking off.] Pilots do not just jump in the plane and go, unlike many of us might do in an automobile. As part of pre-flight safety procedures pilots conduct an operations check (Ops Check) for each of the aircraft’s ignition systems (Mag Checks) during the run-up phase of flight. EPA references past studies in the “Proposed Rule” which identify the “run-up” to be the biggest single contributor to AvGas lead emissions. This is an important observation, and one that has been addressed directly through the proposed solution offered with our comments today. Pilots cannot compromise safety by eliminating their run-up, but they can conduct the run-up, with CODALE in mind, at a more appropriate location,

Only through the development of new engines and associated technology can those aircraft utilizing high compression engines be expected to transition to a lower octane, lead free AvGas. Based on the experience from the automotive industry, and considering the very low attrition rate of aircraft, undertaking such an effort of this magnitude would be extremely costly and take far more than 8 years to accomplish.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0008

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

[Underlined: Safety of aircraft engine operations is of paramount importance and has not been (adequately) addressed in the Proposed Rule.] Should EPA proceed with the endangerment finding under section 231(a)(2)(A) and further move to regulate “Covered Aircraft” under the same authority, it is imperative that risk to the safety of pilots and their passengers be weighed against the benefits of controlling lead emissions by modifications limited to only AvGas or aircraft engines. A thorough review of the “Proposed Rule” results in finding no discussion about the potential for adversely affecting the safety of aircraft operation. The “Proposed Rule” fails to address section 231(a)(B)(ii) which states “The Administrator shall not change the aircraft emission standards if such change would significantly increase

noise and adversely affect safety”. Aircraft safety is of paramount importance to CSA, the Federal Aviation Administration (FAA), to that of the public welfare, as well as to EPA.

Piston-powered aviation serves all aspects of life in the USA and would create undue hardship if aviation was interrupted by mandating lead-free aviation fuel. Less than 0.2% of the U.S. population are licensed to operate aircraft. Much of this can be attributed to the fact that extensive training is required in order to receive a license from FAA to operate an aircraft, training that focuses on safe operation and the rules associated with operating aircraft in the Air Traffic Control (ATC) system. The FAA establishes and enforces rules and regulations as they pertain to pilots and aircraft operations. Even though there are very few licensed pilots, general aviation impacts virtually every walk of life in our society. This would include training, from military to commercial airline operations, to law enforcement, disaster relief efforts, and support of remote communities throughout the world.

Aviation safety is an important element that needs to be addressed in the Proposed Rule. CSA requests that the “Proposed Rule” consider safety as it would pertain to both long term effects as well as the risk of failures with the implementation of any mandated changes to AvGas. The practical aspect of implementation and its effect on safety should be considered and addressed before EPA proceeds with the “Proposed Rule”. Fortunately, there is ample history to draw upon in order to better ascertain the safety issues GA would certainly be faced with, should EPA move to mandate the complete and immediate removal of lead from AvGas.

Comment Number: EPA-HQ-OAR-2022_0389-0692-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Clu Colvin

Organization:

Excerpt Text:

There a few valid points I'd like to make on this subject although there are literally thousands of reasons for the EPA to stay out of this. I'm an airline transport pilot with over 26,000 hours, a mechanic and an aircraft inspector. And live on an airport. As such I am not a writer so excuse my correctness or lack there of. By reading the comments, the majority of the public thinks all aircraft burn leaded fuels and by flying over their houses they are polluting them and it's noisy. Well simply not true. No jets or turbine aircraft burn leaded fuels. And noise pollution has nothing to do with lead so jumping on the EPA band wagon does nothing for that other than show how misguided the public is. The next thing is the public and the EPA feel they should have control of this. Again wrong. The FAA has all of the authority to solve 99 percent of the problem right now while an unleaded fuel alternative is sought. (Yes there are a couple alternatives now but they do not meet the safety requirements for the fleet only part of the fleet). Case in point move the run up areas to remove the lead concentration around airports. Have programs for airports to get funding for offering unleaded fuel for the aircraft that can burn it, ie auto fuel. Do research to actually come up with a lead alternative that meets the engines requirements. The time frame being discussed is 2030, first off with a few policy changes the lead impact can be eliminated around airports within the next few months by doing things and other ideas written above. Why wait that long when we can fix it now. On the other side of that how can we possibly do what the EPA wants by 2030 when still there is no proven safe alternative fuel that meets the spec given by another government agency? How many government agencies and how many rules are required to do the same things? Here we have another government agency not working with another so they want to take over and control it all. The lack of safety involved with this is tremendous. The EPA have no aircraft knowledge at all. No mechanical knowledge at all. Judging by the comments so many people are worried that the corporate jets flying over their houses are poisoning them and hurting their health (again jets don't use lead) well when an airplane has an engine failure and slams into your house because of a rule made by an agency only focused on clean air and not safety how is that going to affect your health? I could go on and on but simple facts are

the problem can be eliminated 99 percent now with in a couple of months if the FAA did their job. I'm actually outraged that these changes weren't done years ago. Our government is to put it simply bankrupt. We spend more than than we take in but yet it's ok to continue to overreach and expand. If my household is not allowed to do something because I can't afford it we don't do it. The government needs to learn those basic rules. Use the tools you have and the money available to accomplish what you want. Captain Clu Colvin

Comment Number: EPA-HQ-OAR-2022_0389-0694-0001

Commenter Type: Private Citizen

Commenter: David Bradshaw

Organization:

Excerpt Text:

Those of us that actively involved in Aviation oppose this rule. Most of the comments in favor here have no idea what they are talking about. Just emotion based nonsense. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. The proposed rule appears to be classic overreach by EPA. America does not need more regulations, WE NEED LESS! There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed.

Comment Number: EPA-HQ-OAR-2022-0389-0198-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: How The West Was Saved

Excerpt Text:

How The West Was Saved encourages the EPA to proceed with the discontinuation of leaded fuel from air vessels still utilizing a toxin that is a serious threat to the collective of humanity, other species, and the Earth itself. Further HTWWS encourages the EPA to support & heavily promote alternative modes of ground transportation that is better suited for the environment. There are claims that cite unleaded fuel as being just as harmful as leaded fuel and there is also a HUGE concern of noise pollution from air vessels, especially in big cities. Let's stop the myth, our cities don't have to be loud and filled with constant noise & fuel pollution from air vessels. We have to do better in taking care of the place that we all call home which is Earth. Mass pollution isn't normal, we have to address and advance the science of transportation modes that are beneficial to the collective.

Comment Number: EPA-HQ-OAR-2022-0389-0199-0004

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

Because the same pipelines transport both avgas and unleaded mogas, there is a rule allowing up to 0.05 g lead per gallon of unleaded mogas (Cabrera, Yvette, 2017). Knowing the consequences of allowing lead additives in mogas, this allowance is unacceptable.

Conclusions: Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to EPA. In addition to polluting the atmosphere, the lead particles also contaminated the environment with what is known as “legacy lead”. The legacy of accumulated lead in community soils and their association with childhood exposure is a topic of my research throughout my career. Regulations allowing TEL in any gasoline must be eliminated to prevent future poisoning of people and additional contamination of the environment.

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Cabrera Yvette, 2021. Leaded gasoline is finally gone—but its toxic legacy lingers. Grist.

Comment Number: EPA-HQ-OAR-2022-0389-0180-0001

Commenter Type: Private Citizen

Commenter: Pritha Multani

Organization:

Excerpt Text:

I am a general pediatrician in Sacramento County, California. I strongly support banning the use of lead in gasoline to prevent neurodevelopmental disorders of current and future generations.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-030-0003

Commenter Type: Advocacy Organization

Commenter: Marcie Keever

Organization: Friends of the Earth

Excerpt Text:

In the meantime, EPA should work with the FAA and any other government agency to move with all deliberate speed to get unleaded AVGAS to the 20,000 airports where leaded AVGAS is used and support airports to get rid of leaded AVGAS similar to what has been done at the Reid-Hillview Airport in Santa Clara County in California.

Comment Number: EPA-HQ-OAR-2022-0389-0169-0001

Commenter Type: Private Citizen

Commenter: Ed Maher

Organization:

Excerpt Text:

Please ban all leaded gasoline, including Aviation fuel, as soon as possible. I live about 5 miles from Palomar Airport, a small regional airport in Carlsbad, CA. There are hundreds of flights there everyday by piston engine aircraft. Each spreading lead in an uncontrolled manner. I find this unbelievable, that the government has not done the right thing to protect us for over 40 years! Yes, lead is very bad, we already know that. These aircraft are creating significant lead pollution due to the volume of fuel used. Airport records show the fuel used per month. The quantity of lead contained in that fuel is in the thousands of pounds per year at this one airport alone. Unleaded options are now approved and they should be implemented immediately. These flights are almost entirely for recreation and non-essential use. Small aircraft flights should be restricted to official and emergency flights only, until they are certified lead free use only.

Comment Number: EPA-HQ-OAR-2022-0389-0135-0001

Commenter Type: Private Citizen

Commenter: Lee Ann Shandle

Organization:

Excerpt Text:

It has come to my attention that Palomar Airport, located in Carlsbad, CA, is among the 50 most lead-polluting airports in the nation. In spite of this fact, Palomar Airport only provides leaded aviation fuel for

its piston-engine planes. The Airport does not offer unleaded aviation fuel that is now available for piston-engine planes. Pilots can't even buy unleaded avgas for their piston planes if they wanted to because it's NOT OFFERED at the airport.

We live in the flight path & my small children also go to school near the airport & in the flight path. Please consider banning all leaded aviation fuels for the health and safety of our community. Even if the risk of lead poisoning is low, why would we take a chance with community health if there are safe, available alternatives?

Comment Number: EPA-HQ-OAR-2022-0389-0167-0001

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

I am highly in support of this proposal to ban leaded gas used by the aviation community for the following reasons:

(1) Solutions exist that negate the requirement to use leaded gas:

(a) Since lead is added as an octane booster to prevent knock in high compression aviation engines, the underlying requirement is fuel that provides for this higher octane. Avgas is typically 100 Octane. Meeting this requirement can be supported by using alternative fuels such as ethanol, which the aviation industry has recently greenlit use of.

<https://www.flightglobal.com/engines/faa-approves-100-octane-unleaded-aviation-fuel-hastening-shift-from-leaded-gas/150065.article>

and

<https://www.eesi.org/papers/view/fact-sheet-a-brief-history-of-octane>

Comment Number: EPA-HQ-OAR-2022-0389-0236-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

If the EPA plans to continue calling itself a public safety agency it must take back ownership of its responsibilities and immediately

1) ban aviation lead,

2) move all public/private flight paths, including those of aviation training programs, away from people by five miles whether on ground or in air and no matter the plane or fleet size - OR move people away from such flight paths with tax free buyouts for renters and property owners,

3) prevent new flight paths from establishing near people and vice versa within five miles again whether on ground or in air and no matter the plane or fleet size.

Comment Number: EPA-HQ-OAR-2022-0389-0249-0001

Commenter Type: State Elected Official

Commenter: Adrian Madaro

Organization: Commonwealth of Massachusetts House of Representative

Excerpt Text:

Considering our proximity in East Boston to the airport, lead emissions have been absorbed by our environment for decades, affecting the health of our residents. Lead is immensely harmful to the health of children and can cause damage to the brain, and nervous system, and slow growth and development, leading to learning and behavioral challenges. In East Boston, we have aircraft flying above playgrounds and schools and it is imperative that the transition to lead-free aviation fuel happen as quickly as possible to protect our vulnerable population. It is commonly known that no level of lead exposure is safe; therefore, while a transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure. I strongly support the decision to ban leaded fuel from aircraft engines due to the consequences communities like East Boston continue to suffer. I believe this is critical to the protection and advancement of public health and environmental stewardship.

Comment Number: EPA-HQ-OAR-2022_0389-0624-0001

Commenter Type: Private Citizen

Commenter: Jessica Gibson

Organization:

Excerpt Text:

The EPA needs to regulate air fuel. Communities closest to airports suffer disproportionate levels of health concerns, and it's the EPA's job to protect these residents.

Comment Number: EPA-HQ-OAR-2022_0389-0535-0001

Commenter Type: Private Citizen

Commenter: L Sulda

Organization:

Excerpt Text:

As a citizen living underneath a "highway in the sky", aka Logan flightpath for runway 33L, I can testify that there are some days when it is impossible to escape the smell of fumes from plane exhaust. It is like living behind a bus. And it is impossible to escape because it is all over our neighborhood and the surrounding area. Factor in that there are multiple schools and senior living complexes underneath this highway in the sky and we are talking about major damage of the health of thousands of innocent people, as the damage lead can do has been thoroughly studied and tested. NO LEVEL OF LEAD EXPOSURE IS EVER SAFE. We need to transition to lead-free aviation fuel as quickly as possible to protect our children and the general public. We do not need more studies or data, we need to protect our children, our health and our environment NOW! Lead is highly toxic and does not degrade. It's clear that any amount

of lead is a clear and present danger. Please do the right thing and support the expedited transition to lead free aviation fuel. Our planet and the people living on it can't wait. Thank you for the opportunity to comment on this very important matter.

Comment Number: EPA-HQ-OAR-2022_0389-0358-0001

Commenter Type: Private Citizen

Commenter: Lawrence Rosin

Organization:

Excerpt Text:

Dear Administrator Michael Regan, I ask to regulate the use of aviation fuel. Aviation fuel releases lead into the atmosphere. Lead is toxic in water, and therefore it's toxic in our atmosphere.

Comment Number: EPA-HQ-OAR-2022_0389-0330-0001

Commenter Type: Private Citizen

Commenter: John Commerford

Organization:

Excerpt Text:

Dear Administrator Michael Regan, EPA should finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, ("avgas").

Avgas is the largest source of lead emissions in the country. Lead exposure is terribly damaging to human health. Over five million people, including more than 360,000 children under the age of 5, live near at least one of the airports where avgas is used.

Do the right thing and ban avgas as soon as practicable.

Comment Number: EPA-HQ-OAR-2022_0389-0322-0001

Commenter Type: Private Citizen

Commenter: Cassandra Pierson

Organization:

Excerpt Text:

I am writing to you today to ask that you step up and protect children from the devastating effects of lead. You must finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in lifelong health issues and learning disabilities. In adults, it's responsible for many diseases including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022-0389-0181-0005

Commenter Type: Private Citizen

Commenter: Kerry McCarthy

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or avgas, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color.

Banning avgas cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0271-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The government has disregarded a single source of lead that has persisted throughout the nation for decades despite the fact that lead is well recognized to be particularly hazardous to children. It should now stop utilizing gasoline with lead-air. Cardiovascular disease, which kills roughly 500,000 adults annually and permanently harms children's development, is brought on by lead exposure. EPA should engage with the Federal Aviation Administration to rapidly and gradually eliminate lead-containing avgas after completing the hazard's detection as soon as practicable.

Comment Number: EPA-HQ-OAR-2022_0389-0272-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I think the EPA should update its current rules for lead in domestic paint and soil, as well as regulate aviation gasoline, the main source of lead emissions into the atmosphere, in order to safeguard children and communities from lead exposure. If the EPA truly cares about environmental justice and human health, it must immediately stop using leaded aviation fuel. Since lead is so harmful to human health, the most motor vehicles have been free of lead for the past 25 years. The EPA needs to act similarly for aviation gasoline, which is currently responsible for 70% of lead emissions into the atmosphere. Lead increases adult mortality and harms children permanently. In my opinion, it should cover all the regulations which are related to public health and require protection for public health in population.

Comment Number: EPA-HQ-OAR-2022_0389-0273-0002

Commenter Type: Private Citizen

Commenter: Julie Schwam Harris

Organization:

Excerpt Text:

With all that is known of the dangers of lead to children at any level and its persistence in the environment, I can only beg you to list aviation fuel that contains lead as a dangerous substance and to ensure that future rules and regulations prohibit it being allowed in the fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0280-0001

Commenter Type: Private Citizen

Commenter: Bill Nierstedt

Organization:

Excerpt Text:

I am writing as a voting American citizen who has been involved in environmental issues my entire adult life. In this particular issue, I thought that our society had outlawed the sale of leaded gas years ago. I was extremely disappointed to learn that we still sell leaded gasoline for airplanes! WHY? When we know that it is no good for our environment??? I therefore urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Bill Nierstedt Garwood, NJ 07027

Comment Number: EPA-HQ-OAR-2022_0389-0281-0001

Commenter Type: Private Citizen

Commenter: Terry Brownfield

Organization:

Excerpt Text:

Leaded gas was banned 25 years ago, so we are WAY behind in similarly banning it in avgas!! This is crazy - the health implications were known 30 years ago!! Please, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Please do this NOW. I don't need to remind you of the dangers and illness caused by lead exposure; you know them. We need you to act on this ethical issue for our children's future now. [FL TEXT REMOVED] Sincerely, Terry Brownfield Larkspur, CO 80118

Comment Number: EPA-HQ-OAR-2022_0389-0282-0001

Commenter Type: Private Citizen

Commenter: Paula Morrow

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded gasoline was banned in most cars 25 years ago, so I don't understand why it is still used today in airplanes. Aviation gas is the largest source of lead emissions in the country. Please take action to have the Federal Aviation Administration ban leaded aviation gas soon.

Comment Number: EPA-HQ-OAR-2022_0389-0285-0001

Commenter Type: Private Citizen

Commenter: Jim Long
Organization:

Excerpt Text:

I have personal experience observing piston-driven aircraft habitually circulating above an elementary school and middle school in Bryans Road, MD, only 19 miles from EPA headquarters. You can see 12 second video clip here: <https://youtube.com/shorts/ZUQ4VGEj0Jk> Therefore, I write to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Jim Long Ithaca, NY 14850

Comment Number: EPA-HQ-OAR-2022_0389-0286-0001

Commenter Type: Private Citizen

Commenter: Kent Borges

Organization:

Excerpt Text:

As a constituent from Colorado Springs, CO (80904) concerned about the devastating impacts of climate change we see all around us, I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As we have long known, [FL TEXT REMOVED] Currently [FL TEXT REMOVED] I implore the EPA to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Thank you for your consideration of this matter of the utmost importance and urgency for the health of millions of Americans. Sincerely, Kent Borges Colorado Springs, CO 80904

Comment Number: EPA-HQ-OAR-2022_0389-0288-0001

Commenter Type: Private Citizen

Commenter: Alexander Oehrlein

Organization:

Excerpt Text:

I was not even aware that leaded fuel in aviation is still in use. Hadn't that already become common sense in the 80's and 90s that lead in gasoline should be banned? I am not blaming you for this, but since you have now the administrative power and means at hand, I am writing to urge you as a fellow air-breather to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Alexander Oehrlein Lovilia, IA 50150

Comment Number: EPA-HQ-OAR-2022_0389-0289-0002

Commenter Type: Private Citizen

Commenter: Naomi Pless

Organization:

Excerpt Text:

Following that I ask that you quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the United States.

Comment Number: EPA-HQ-OAR-2022_0389-0301-0001

Commenter Type: Private Citizen

Commenter: Carol Brock

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please ban leaded gas used by piston engine aircraft. They fly overhead here all the time and are needlessly exposing children and vulnerable adults to toxic fumes every day!

Comment Number: EPA-HQ-OAR-2022_0389-0290-0004

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

I'm a physician and I insist you finalize an endangerment finding for leaded aviation gasoline then to quickly adopt new rules eliminating the use of leaded aviation gasoline, or "avgas".

Delaying only begets more delays. [FL TEXT REMOVED] Please, finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Sincerely, Bruce Hlodnicki Indianapolis, IN 46226

Comment Number: EPA-HQ-OAR-2022_0389-0295-0001

Commenter Type: Private Citizen

Commenter: Lane Trippe

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure poses a huge health risk to all people but especially to infants and children.

Comment Number: EPA-HQ-OAR-2022_0389-0297-0001

Commenter Type: Private Citizen

Commenter: John Wagner

Organization:

Excerpt Text:

Please - the time for leaded gasoline and aviation fuel is long over. There is no question that lead is harmful to all life, and especially to infants and young children. Michael - Please put an end to lead in aviation fuel, not at some distant date, but in 2023. If some flights must be canceled or delayed while a switch to unleaded fuel is happening, that is a small price for corporations to pay in order to protect all Americans and other citizens of the world.

Comment Number: EPA-HQ-OAR-2022_0389-0298-0001

Commenter Type: Private Citizen

Commenter: Diane Daiute

Organization:

Excerpt Text:

Perhaps this is one of the reasons why Humans have become increasingly stupid, with lower IQs and susceptible to conspiracies etc..... That combined with all the other 350,000 man-made chemicals we are subjected to and our total reliance on the power of the computer which has caused what i call lazy brain (i can't do math in my head any more, or spell etc.) is causing our brains to devolve.....dissolve. I thought Lead was removed from gasoline in the 1980s. Stupid me. I was 30y/o at the time, grew up in SFBA so was very much affected by Lead. Lead gasoline kills. It causes heart disease, stroke, and cancer and has been a leading cause of harm to brain development. Studies show that exposure to the chemical can reduce a person's IQ by five to ten points. GET THE LEAD OUT!!!!!!!!!!!!!!

Comment Number: EPA-HQ-OAR-2022_0389-0299-0001

Commenter Type: Private Citizen

Commenter: Barbara Fant

Organization:

Excerpt Text:

This is to urge you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0302-0001

Commenter Type: Private Citizen

Commenter: Debra Levinson

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0300-0001

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

I am writing to urge you to finalize a finding of endangerment due to leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0303-0001

Commenter Type: Private Citizen

Commenter: Dave Potter
Organization:

Excerpt Text:

Dear Administrator Michael Regan, Looks to me like we are way over-due for action to stop lead air pollution from airplane fuel. Change often doesn't come without some level of "push." I strongly ask EPA to make this push happen for the airplane folks. They should not be allowed to keep on polluting our air. Same as all the kick back on car requirements and the advent of catalytic converters..."the sky is falling, the sky is falling!" Did not happen! Industry complies....if they are faced with no way to not comply so as to keep on polluting. Now we have cleaner air due to cleaner running cars...All thanks to bold, strong federal leadership that forced - yes "forced" - the auto industry to stop their polluting. Please, please retrace past leaders' courageous actions and move to stop lead being burned in aircraft. Do the right thing now....Before the industry's lackies [Republicans] get back into power.

Comment Number: EPA-HQ-OAR-2022_0389-0306-0001
Commenter Type: Private Citizen
Commenter: Mary Ann Hart
Organization:

Excerpt Text:

Dear Administrator Michael Regan, I am writing to speak out for my support of the banning of what is known as avgas. The lead that is released in the air around airports affects the health and development of the people who live near them. These are generally lower-income communities, and I believe they deserve the same respect in public health as those who can afford to live in places without these environmental stressors. I would like you to ban leaded gas in small airplanes and eliminate this single largest source of lead emissions in our country.

Comment Number: EPA-HQ-OAR-2022_0389-0289-0006
Commenter Type: Private Citizen
Commenter: Naomi Pless
Organization:

Excerpt Text:

Please work to finalize the endangerment finding as soon as possible and then urge the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Naomi Pless MD Rochester, NY 14623

Comment Number: EPA-HQ-OAR-2022_0389-0299-0003
Commenter Type: Private Citizen
Commenter: Barbara Fant
Organization:

Excerpt Text:

Please finalize the endangerment finding as soon as possible and quickly work with the Federal Aviation Administration to ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0300-0004
Commenter Type: Private Citizen

Commenter: Keigler Michele
Organization:

Excerpt Text:

EPA translation of French language comment:

The ban on avgas cannot wait. Every single day that leaded gasoline is used in piston-engine aircraft, communities across the country breathe lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft at 20,000 airports.

The time has come. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration in order to quickly ban lead avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0309-0002

Commenter Type: Private Citizen

Commenter: Craig Wallentine

Organization:

Excerpt Text:

Historically, this area has been used as a "sacrifice zone" to keep polluting transportation and industrial activities out of majority Caucasian neighborhoods in Utah. Now that there are approved high octane alternatives, banning leaded avgas cannot happen fast enough to protect our community.

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas in Utah and other states.

Comment Number: EPA-HQ-OAR-2022_0389-0310-0001

Commenter Type: Private Citizen

Commenter: Peter Jones

Organization:

Excerpt Text:

I ask you to adopt rules eliminating the use of leaded aviation gasoline. Avgas is the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0310-0003

Commenter Type: Private Citizen

Commenter: Peter Jones

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used in nearly 170,000 piston-engine aircraft. Please finalize this endangerment finding and work with the Federal Aviation Administration to finally ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0312-0001

Commenter Type: Private Citizen

Commenter: Kara Masters

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0312-0003

Commenter Type: Private Citizen

Commenter: Kara Masters

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to ban leaded avgas as quickly as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0315-0001

Commenter Type: Private Citizen

Commenter: Robin Vesey

Organization:

Excerpt Text:

I am writing to urge you to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0315-0002

Commenter Type: Private Citizen

Commenter: Robin Vesey

Organization:

Excerpt Text:

Please work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0316-0001

Commenter Type: Private Citizen

Commenter: Joyce King

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please eliminate leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I'm sure you know the dangers to all living things from lead pollution. Please finalize the endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0318-0001

Commenter Type: Private Citizen

Commenter: Laura Ziegler

Organization:

Excerpt Text:

I live in a building that's been standing since the 1830s, so I'm reminded of the hazards of lead whenever I look at the paint on my windowsill. I was born in 1958, so I know about the hazards of leaded gasoline and why it came to be banned. But until I received an alert from Earthjustice this morning, I was unaware that leaded fuel was still in use. Now that I've been put on notice I'm writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0319-0001

Commenter Type: Private Citizen

Commenter: Carol Steinhart

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country, as soon as possible. You are well aware that lead is a deadly and versatile poison. Please work with the Federal Aviation Administration to ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0321-0001

Commenter Type: Private Citizen

Commenter: John Holstein

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0322-0001

Commenter Type: Private Citizen

Commenter: Cassandra Pierson

Organization:

Excerpt Text:

I am writing to you today to ask that you step up and protect children from the devastating effects of lead. You must finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in lifelong health issues and learning disabilities. In adults, it's responsible for many diseases including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0323-0001

Commenter Type: Private Citizen

Commenter: David Bishton

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for lead in aviation gasoline and to quickly adopt rules eliminating its use. The EPA knows that [FL TEXT REMOVED] This problem is not going away. Banning lead in small aircraft aviation fuel cannot wait for some future time when political winds change. It is one of the largest sources of lead contamination in the environment. Lead was banned in most gasoline cars 25 years ago, but leaded avgas is still used today in approx. 170,000 piston-engine aircraft across 20,000 airports. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban lead in avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0001

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

Leaded aviation gasoline is an environmental hazard. I'm writing to ask that you finalize an endangerment finding for leaded aviation gasoline and that you act fast to adopt rules that eliminate the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0004

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

We must ban aviation gasoline NOW. Every day that leaded gasoline is used in piston-engine planes, children and their parents, grandparents, teachers, and ministers are breathing in lead from leaded gasoline--which was banned in most cars 25 years ago! But it is still used today in nearly 170,000 piston-engine aircraft at 20,000 airports. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0329-0001

Commenter Type: Private Citizen

Commenter: Deb Merchant

Organization:

Excerpt Text:

Gas guzzling must become a tragic decision of the past! We are way overdue for using our intellect to reduce emissions, improve human health, and keep our economy stable in the process. When we do the right thing for the planet and people, everyone is better off. Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] The time is now!!

Comment Number: EPA-HQ-OAR-2022_0389-0332-0001

Commenter Type: Private Citizen

Commenter: Peter Liepmann

Organization:

Excerpt Text:

Leaded gasoline is a hazard to public health and should be banned immediately. Engines can be reengineered or replaced to run on unleaded fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0333-0001

Commenter Type: Private Citizen

Commenter: Rich Elam

Organization:

Excerpt Text:

How much lead are we going to put out in the air and environment for our children to breath? I would seriously hope you think Zero.

Comment Number: EPA-HQ-OAR-2022_0389-0335-0001

Commenter Type: Private Citizen

Commenter: Mary Stewart

Organization:

Excerpt Text:

Why are planes allowed to spew lead, While they are flying overhead? It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. If lead was too dangerous to be in fuel for automobiles, why is it still permitted for planes. It is known to be the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0338-0001

Commenter Type: Private Citizen

Commenter: Karon Johnson

Organization:

Excerpt Text:

I am writing to urge the EPA to eliminate Avgas as a fuel for airplanes. just when I think our nation is making some progress in addressing environmental hazards, I read about something like this. We've eliminated lead from paint and gas for cars--why are we allowing it anywhere where it can be breathed by people?

Comment Number: EPA-HQ-OAR-2022_0389-0340-0001

Commenter Type: Private Citizen

Commenter: Louisa McCleary

Organization:

Excerpt Text:

I often visit near Hailey, ID, where the airport is directly next to the town. It is horrible to think that friends and their children living there are exposed to lead fumes. Many small planes fly in and out of there. I am sure there are similar situations in many places elsewhere. In addition, lead emissions must endanger those who work at airports. It's time we eliminated the use of leaded aviation fuels.

Comment Number: EPA-HQ-OAR-2022_0389-0341-0001

Commenter Type: Private Citizen

Commenter: Leslie Friedman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and quickly to adopt rules eliminating the use of leaded aviation gasoline. "Avgas", is the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0341-0002

Commenter Type: Private Citizen

Commenter: Leslie Friedman

Organization:

Excerpt Text:

If you knew that your family was exposed to these toxic emissions would you still feel there is no rush about this issue? There is a need to rush to remove the lead. As people say when they want something now, "Get the lead out!" and get a move on NOW.

Comment Number: EPA-HQ-OAR-2022_0389-0343-0001

Commenter Type: Private Citizen

Commenter: Dale Bickenbach

Organization:

Excerpt Text:

Please finalize these endangerment findings as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0345-0002

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Furthermore, I urge you to swiftly adopt rules and regulations prohibiting the use of leaded aviation gasoline-- "avgas"-- the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022_0389-0345-0005

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago. It is time to ban avgas in nearly piston-engine aircraft.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0001

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

And here I was thinking we'd gotten lead out of gasoline. Now I learn that airplane fuel still contains this element that's so damaging to health of exposed people, like airport workers. That source of lead emissions remains the largest in the U.S. So I urge that you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0003

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

While leaded gasoline was banned in most cars 25 years ago, we still use it today in nearly 170,000 piston-engine aircraft in some 20,000 airports. Banning leaded aviation fuel cannot wait.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0004

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded aviation gas.

Comment Number: EPA-HQ-OAR-2022_0389-0348-0001

Commenter Type: Private Citizen

Commenter: David Williams

Organization:

Excerpt Text:

Dear Administrator Michael Regan, We banned lead in automobile fuel nearly 50 years ago, and older cars ran ok on unleaded. How is it that aviation gasoline still has lead in it?

Comment Number: EPA-HQ-OAR-2022_0389-0350-0001

Commenter Type: Private Citizen

Commenter: Scott Forrest

Organization:

Excerpt Text:

I live in a small town with a small airport, and I'm concerned about the lead that I'm breathing every day because of that, and I'm even more concerned about the children that live in my community and what lead is doing to them. It's way past time to ban lead in aviation fuel!

Comment Number: EPA-HQ-OAR-2022_0389-0351-0001

Commenter Type: Private Citizen

Commenter: Mary Florence Brink

Organization:

Excerpt Text:

Dear Administrator Michael Regan, It has been a long time since it was determined that the presence of lead in our paints, the air we breathe, and other items we use daily is a hazard to our health, and in particular, to the health of America's children. Lead had been banned in paints and gasoline, in toys and some sports equipment. As begin to travel more and our airline industry picks up after a drop in action during the Covid pandemic, it is time to finally ban the use of lead in aviation fuel. This is not a new idea- it's been recommended for the past 15 years. NOW is the time to finally act and ban the practice of putting lead in fuel for airplanes. It is time to protect the health of our most vulnerable populations-our children and grandchildren, and people who live in BIPOC communities, areas where lead pollution is typically the worst, because that's where we rich white folks like to dump our waste products. PLEASE, enact a ban on lead in aviation fuel immediately.

Comment Number: EPA-HQ-OAR-2022_0389-0352-0001

Commenter Type: Private Citizen

Commenter: Sharon Burke

Organization:

Excerpt Text:

Dear Administrator Michael Regan, I had no idea that aviation fuel contained lead. I know that we sensibly banned lead from automobile gasoline and paint years ago, so I had assumed that we were safe from this toxic substance. It is very disheartening to learn about aviation fuel and its lead toxicity.

Comment Number: EPA-HQ-OAR-2022_0389-0353-0001

Commenter Type: Private Citizen

Commenter: Russell Smith

Organization:

Excerpt Text:

Get the lead out.. ha ha.. actually not a laughing matter.. Lead leads to violence and stupidity. Not what we are trying to achieve..

Comment Number: EPA-HQ-OAR-2022_0389-0355-0001

Commenter Type: Private Citizen

Commenter: Mike Ellison

Organization:

Excerpt Text:

I am writing to you from Vancouver, WA where we have a local airstrip located adjacent to our downtown area and a wonderful new waterfront development. These are the public squares for our city with Farmer's markets, festivals, and other civic gatherings. as an environmental chemist, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0356-0001

Commenter Type: Private Citizen

Commenter: Dylan Johnson

Organization:

Excerpt Text:

I strongly support this move. Lead air emissions can go along with fossil fuel emissions and both are terribly destroying our environment. They can cause the ozone layer to become smaller and smaller because of the excess amounts of CO2 in the air. If the ozone layer diminishes then the Earth will become hotter and hotter. This is because the ozone layer is what shields our Earth from feeling the sun's full heat. If we can't save our ozone layer then we must face the consequences of our Earth becoming hotter. This includes coral bleachings, glaciers melting and our winters having less snow. All this can be stopped if we can all come together and stop lead emissions from aircraft engines.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0001

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for toxic leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, has long been known to result in devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0003

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

Banning avgas certainly cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are forced to breathe in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports, sounds like a sweet deal for aviation, not so much for neighborhoods.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0004

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban deadly leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0361-0001

Commenter Type: Private Citizen

Commenter: Emily Ecker

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0365-0001

Commenter Type: Private Citizen

Commenter: L.W. Brown

Organization:

Excerpt Text:

I am urge you to finalize the endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", now the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating childhood impacts and serious illness in adults. [FL TEXT REMOVED] Children living near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Every day that leaded gasoline is used in aircraft, lead poisons people. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today at over 20,000 airports. The need is immediate. Please finalize this finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, L.W. Brown
Bellingham, WA 98229

Comment Number: EPA-HQ-OAR-2022_0389-0367-0001

Commenter Type: Private Citizen

Commenter: Darcy Struckman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline. Lead exposure is responsible for serious illness, as you are aware. [FL TEXT REMOVED] I ask you to finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Darcy Struckman
Carmichael, CA 95608

Comment Number: EPA-HQ-OAR-2022_0389-0368-0001

Commenter Type: Private Citizen

Commenter: Susan Khalsa-Wyborski

Organization:

Excerpt Text:

[FL TEXT REMOVED] I am 73 years old and live near an airport and Military base that flies all sorts of air vehicles. I don't think I should have to be victimized by their toxins when there are safe substitutes. Break up the fuel conglomerations who block progress at every turn. [FL TEXT REMOVED] Sincerely, Susan Khalsa-Wyborski Salem, OR 97301

Comment Number: EPA-HQ-OAR-2022_0389-0369-0001

Commenter Type: Private Citizen

Commenter: Andrea Matsushima

Organization:

Excerpt Text:

Thank you for acknowledging our petition. I am writing to urge you to finalize an ENDANGERMENT finding for leaded aviation gasoline or "avgas". Leaded gasoline was banned in most cars 25 years ago. Yet avgas still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Avgas is the largest source of lead emissions in the COUNTRY. Every day that leaded gasoline is used in piston-engine aircraft, we are breathing in lead. [FL TEXT REMOVED] Once an ENDANGERMENT finding is finalized, please work with the FAA to quickly adopt rules to stop the use of leaded aviation gasoline. Sincerely, andrea matsushima Albany, CA 94706

Comment Number: EPA-HQ-OAR-2022_0389-0371-0001

Commenter Type: Private Citizen

Commenter: Daniel Davids

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, aka "avgas." We have waited much too long to ban lead from avgas. [FL TEXT REMOVED] Sincerely, Daniel Davids Woodinville, WA 98077

Comment Number: EPA-HQ-OAR-2022_0389-0372-0001

Commenter Type: Private Citizen

Commenter: James Phillips-farley

Organization:

Excerpt Text:

I appreciate that your decision implicates multiple policy choices and trade offs. However, when it comes to lead - which has no known safe level, and where exposure in minimal quantities can have life-altering impacts on children, pregnant women, and other vulnerable individuals - the EPA must make the right decision, consistent with its findings in other areas for lead paint and lead drinking water lines: ban leaded aviation gasoline. Burning leaded fuel in airplanes is no different, and perhaps worse, than burning it in cars was in the 1970s and earlier. Airplanes spread their particulates as they fly, and living near an airport (like living near a highway) is often one of the only places where poor, minority people can afford to live. This is a fundamental issue of environmental justice, so please - consider the balance between small airplanes (typically owned by a few wealthy individuals, perhaps crop dusting companies, and not too many others) and everyone who must breath and ingest the lead poison that they spew, and make the

decision that is fair and just: phase out lead AV fuel, and eliminate this toxin. [FL TEXT REMOVED]
Sincerely, James Phillips-farley Baltimore, MD 21229

Comment Number: EPA-HQ-OAR-2022_0389-0378-0001

Commenter Type: Private Citizen

Commenter: Marie Schultz

Organization:

Excerpt Text:

[FL TEXT REMOVED] I urge EPA to make the finding to protect public and move all aviation beyond leaded fuels We need to get the lead out -period! The lead pipes in the city of Milwaukee are a disgrace. Poisoning children. Leaded gas just should not be allowed-period! Retrofit the planes so they can use regular fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0380-0001

Commenter Type: Private Citizen

Commenter: Nancy Carol Traeger

Organization:

Excerpt Text:

[FL TEXT REMOVED] Personally, this was a shock to learn that leaded fuel is actually being used! I figured unleaded fuel was the only way to go. So, yes, do change this practice for the sake of cleaner air. Those of us who suffer asthma and COPD sure would appreciate it!

Comment Number: EPA-HQ-OAR-2022_0389-0383-0001

Commenter Type: Private Citizen

Commenter: Molly Niven

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Imagine a legacy in which you played the critical role of removing 70% of lead from the atmosphere. This could be you! Are you brave enough? Significant life saving actions don't happen without some risk - to your reputation, your balance sheet. Secretary Regan, have the courage to act NO. Save lives. Act to remove lead from aviation gasoline NOW.

Comment Number: EPA-HQ-OAR-2022_0389-0384-0001

Commenter Type: Private Citizen

Commenter: Jerry Hickson

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Planes burning avgas are showering lead all across our country. [FL TEXT REMOVED] Every day that leaded gasoline is used in piston-engine aircraft, people in communities across the country are breathing in lead. [FL TEXT REMOVED] This is not necessary.

Plane engines can be changed so they do not need lead, just as auto engines were changed long ago. [FL TEXT REMOVED] Sincerely, Jerry Hickson Hartland, VT 05048

Comment Number: EPA-HQ-OAR-2022_0389-0386-0002

Commenter Type: Private Citizen

Commenter: Rebecca Baggett

Organization:

Excerpt Text:

I write to you as a concerned citizen and grandmother, to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher lead levels in their blood. As a mother and grandmother, this appalls me. The actions and inactions of the Trump administration have delayed progress toward environmental protections in every arena, impacting our health and the health and wellbeing of future generations. Banning avgas cannot and should not wait. [FL TEXT REMOVED] Sincerely, Rebecca Baggett Athens, GA 30605

Comment Number: EPA-HQ-OAR-2022_0389-0387-0001

Commenter Type: Private Citizen

Commenter: Susan Stafford

Organization:

Excerpt Text:

As a mother, I'm asking you to make a finding that leaded aviation gasoline is an endangerment to the health of our children and to the rest of the population. Recently we've seen chocolate manufacturers sued for not warning the public of veer small concentrations of lead in dark chocolate. Yet leaded aviation gasoline, or "avgas", is the largest source of lead emissions in the country. Rules should be adopted eliminating the use of "avgas". [FL TEXT REMOVED] Sincerely, Susan Stafford Tallahassee, FL 32308

Comment Number: EPA-HQ-OAR-2022_0389-0393-0001

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Todd Gutmann Cupertino, CA 95014

Comment Number: EPA-HQ-OAR-2022_0389-0395-0001

Commenter Type: Private Citizen

Commenter: Erik Tomson

Organization:

Excerpt Text:

If possible the removal of lead based fuel for the aviation landscape should happen. In the past we have

discovered the adverse effects lead has on human health and we have made changes to the paints we use and the gas we have for our cars. With this in mind the effects on humans alone should be the driving factor into the phasing in of unleaded fuel for aviation use, if possible. The problem of pollution will be seen with both leaded and unleaded fuel so the betterment of human health should be taken into account before environmental, which is a different problem altogether. Any justification of not phasing out leaded fuels is absurd, so long as its not related to the certification delays of unleaded fuel being tested for aviation use.

Comment Number: EPA-HQ-OAR-2022_0389-0396-0001

Commenter Type: Private Citizen

Commenter: Ellen Henry

Organization:

Excerpt Text:

Please quickly finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. The major toxicity of lead, particularly during childhood, is well-known and has been for decades. There is no excuse for still allowing its use in something as prevalent as aviation fuel. [FL TEXT REMOVED] Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead and risking their healthy future. Leaded gasoline was banned in most cars 25 years ago, so why is it still permitted in aviation?! [FL TEXT REMOVED] Sincerely, Ellen Henry Pittsford, NY 14534

Comment Number: EPA-HQ-OAR-2022_0389-0397-0001

Commenter Type: Private Citizen

Commenter: Kathryn Wild

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded aviation gasoline "avgas" is the largest source of lead emissions in the country. Please finalize the endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0400-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Riebschlaeger

Organization:

Excerpt Text:

Climate Change and Global Warming are impacting all of us now. For our children, the impacts will only be worse, if the trends continue. But you, on behalf of all of us, can act now to slow and even reverse the disastrous results of our own actions. Perhaps we were all ignorant or deceived by fake science and industry denial. But now Nature herself is demonstrating that Global Warming and its impacts are real. Further, that conscious human activities are worsening the natural process we call "Climate Change". We cannot let this continue, but must act as responsible adults. Therefore, I am joining thousands of Americans now writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Elizabeth Riebschlaeger Victoria, TX 77901

Comment Number: EPA-HQ-OAR-2022_0389-0402-0001

Commenter Type: Private Citizen

Commenter: Marc Fleisher

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Is it naive of me to think that, if lead is forbidden in automobile gas, it should also be forbidden in avgas? I hope not. Lead is bad for children and birds and more. The time is now to stop using it in aviation gas. Please make this endangerment ruling final.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0001

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

I did not realize that when small planes flew over my neighborhood, they were still using leaded gasoline, which was banned in most cars 25 years ago. Please finalize an endangerment finding for leaded aviation gasoline, and quickly adopt rules eliminating the use of leaded "avgas", which is the largest source of lead emissions in the nation.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0004

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

Banning avgas can't wait. [FL TEXT REMOVED] Please finalize this endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0406-0001

Commenter Type: Private Citizen

Commenter: Matty Wuest

Organization:

Excerpt Text:

Please ban the sale of leaded fuel for use in aircraft. I live near a small airport with non-stop, small aircraft flights. The air and the soil are polluted and a danger to human health. Please force all airports to supply ONLY unleaded fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0407-0005

Commenter Type: Private Citizen

Commenter: David Pedersen

Organization:

Excerpt Text:

As discussed in the text of the proposed rule, the Administrator has received numerous petitions seeking an endangerment finding for leaded aviation fuel and its emissions (dating back to 2003, if not even earlier). I concur with other commenters that it is concerning that it has taken this long for this proposed endangerment finding to be published, especially in light of the empirical and more recently statistical evidence of the dangers of lead. However, I am grateful that the Administrator has now made this proposed finding. I urge the Administrator to finalize this proposed rule and promulgate emissions / fuel standards that will hopefully rid our skies, and everything below them, of airborne lead as soon as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0409-0001

Commenter Type: Private Citizen

Commenter: Catherine Carter

Organization:

Excerpt Text:

I know you hear from me a lot (or at least your staff does), and I'm sorry about that. But I'm writing today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I know you're already aware that lead exposure, particularly during childhood, can result in devastating impacts on health and is responsible for serious illness in adults, including cancer and cardiovascular disease. According to the EPA's own data, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. [FL TEXT REMOVED] This needs to change right now. [FL TEXT REMOVED] Sincerely, Catherine Carter Cullowhee, NC 28723

Comment Number: EPA-HQ-OAR-2022_0389-0410-0001

Commenter Type: Private Citizen

Commenter: Sj Worthman

Organization:

Excerpt Text:

[FL TEXT REMOVED] Long-term effects of lead poisoning affect us all. [FL TEXT REMOVED] As you know, leaded gasoline was banned in most cars 25 years ago, but avgas remains. Twenty-five years of inaction on this issue is twenty-five years too long. Please act now to help extinguish use of this dangerous pollutant. [FL TEXT REMOVED] Sincerely, Sj Worthman Denver, CO 80212

Comment Number: EPA-HQ-OAR-2022_0389-0414-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Sexton

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. The amount of lead pollution from this source is primary. Please ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0416-0001

Commenter Type: Private Citizen

Commenter: Sherry Kessel

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. We need to immediately ban leaded gasoline used in piston engine aircraft. It is poisoning people living close to airports. Please work with the Federal Aviation Administration to quickly ban leaded avgas so that lives can be saved.

Comment Number: EPA-HQ-OAR-2022_0389-0422-0001

Commenter Type: Private Citizen

Commenter: Gwendolyn Wright

Organization:

Excerpt Text:

Dear EPA, As a Pediatrician I am very concerned about ongoing lead pollution in our country. It is unconscionable that leaded gasoline continues to be used in aircraft. We have banned lead from paint and auto fuel, yet we continue to battle against the legacy that those mistakes have left behind. Every day I prick the fingers of babies to check for lead poisoning that is otherwise invisible. I have seen first hand the effects of lead poisoning. Airports are often in underserved neighborhoods and disproportionately affect those least able to mitigate the effects. Please ban the use immediately.

Comment Number: EPA-HQ-OAR-2022_0389-0432-0001

Commenter Type: Private Citizen

Commenter: Mimi Sandeen

Organization:

Excerpt Text:

Personal note: Stopping the use of leaded aviation gasoline is just plain common sense. And why has the aviation industry been given a pass, and a different standard, than automobiles, when the result of using leaded gasoline is the same in either circumstance??? By your own estimate, emissions from these airplanes account for about 70% of lead released into the atmosphere. And they're being allowed to use it??? That doesn't make sense at all! So, I'm writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0433-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

I ask you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Studies have shown that children who live near airports have higher levels of lead in their blood.

Comment Number: EPA-HQ-OAR-2022_0389-0433-0002

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

Every day that leaded gasoline is used in aircraft, communities across the country are breathing in lead. Please work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0434-0001

Commenter Type: Private Citizen

Commenter: Mindy Yanish

Organization:

Excerpt Text:

My brother owns airplanes that use avgas, but we know how bad that is and have to ban avgas now. They are, as most small planes, purely recreational. We know our air and our health are in danger, and many people have already suffered the tragic consequences of government inaction.

Comment Number: EPA-HQ-OAR-2022_0389-0435-0001

Commenter Type: Private Citizen

Commenter: Diane Fails

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0435-0002

Commenter Type: Private Citizen

Commenter: Diane Fails

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today.

Comment Number: EPA-HQ-OAR-2022_0389-0438-0001

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. My child was impacted by lead poisoning due

to exposure from a neighbor's improperly stripping paint from their home. Lead exposure, particularly during childhood, can result in devastating impacts on health, as I am personally aware.

Comment Number: EPA-HQ-OAR-2022_0389-0438-0003

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Banning this toxic gasoline cannot wait.

Comment Number: EPA-HQ-OAR-2022_0389-0438-0004

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Please, with urgency, finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0439-0001

Commenter Type: Private Citizen

Commenter: Dani Gioseffi

Organization:

Excerpt Text:

The usage of leaded aviation fuel is criminal! We are writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0439-0002

Commenter Type: Private Citizen

Commenter: Dani Gioseffi

Organization:

Excerpt Text:

You must for the love of life ban leaded aviation fuel NOW. Our environment is being destroyed. All life is on the line now. Ban leaded aviation fuel NOW. PLEASE for the love of life!!!

Comment Number: EPA-HQ-OAR-2022_0389-0440-0001

Commenter Type: Private Citizen

Commenter: Margaret Barrett

Organization:

Excerpt Text:

Leaded gasoline is every bit as dangerous now as it was when it was banned from most cars 25 years ago.

That is why I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and then quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas".

Comment Number: EPA-HQ-OAR-2022_0389-0441-0001

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

PLEASE! As a frequent flyer who's wracked up millions of miles on all the major U.S. airlines, I BET YOU! Ban leaded aviation fuel. The technology is well within our grasp. There is no reason to continue pumping massive amounts of lead into the air we breathe and the atmosphere we use to grow food.

Comment Number: EPA-HQ-OAR-2022_0389-0441-0002

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

I URGE you to 1. finalize an endangerment finding for leaded aviation gasoline and 2. quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure is no joke. Our kids are especially at risk. Our elderly and health-compromised are too. And we healthy adults can develop ailments because of it. There's tons of evidence showing the danger of lead to human health. Lead exposure is responsible for serious illness in adults that include cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0441-0006

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

Please work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0444-0001

Commenter Type: Private Citizen

Commenter: Brenda Frey

Organization:

Excerpt Text:

This ban can not wait because so many people have already been affected by the lead exposure and in your position you can make sure that this stops.

Comment Number: EPA-HQ-OAR-2022_0389-0445-0001

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0445-0003

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

Our communities across the country are breathing in lead! Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to ban leaded avgas NOW.

Comment Number: EPA-HQ-OAR-2022_0389-0446-0001

Commenter Type: Private Citizen

Commenter: Jess Zelniker

Organization:

Excerpt Text:

It is long overdue to ban the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, is a long-known serious health hazard.

Comment Number: EPA-HQ-OAR-2022_0389-0447-0001

Commenter Type: Private Citizen

Commenter: MaryAnn and Frank Graffagnino

Organization:

Excerpt Text:

AS two caring and concerned people, my husband and I are writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0447-0002

Commenter Type: Private Citizen

Commenter: MaryAnn and Frank Graffagnino

Organization:

Excerpt Text:

PLEASE, FOR THE HEALTH AND WELL-BEING OF ALL CURRENT AND FUTURE GENERATIONS, WILDLIFE AND THE ENVIRONMENT, ban leaded aviation gas, the largest source of lead emissions in the country. THIS IS THE HEALTHY, RIGHT, FAIR, JUST, HUMANE ACTION TO TAKE!!!!

Comment Number: EPA-HQ-OAR-2022_0389-0448-0002

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0448-0005

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Banning avgas is important and cannot wait. Each and every day that leaded gasoline is used in piston-engine aircraft, people and animals across the country are breathing in toxic lead. Leaded gasoline was correctly banned in cars and paint products 25 years ago. Unfortunately and unwisely, avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. This remains unacceptable in the USA. Please finalize this endangerment finding now, and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0449-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

It is long overdue for EPA to take a holistic approach to protect children and communities from lead exposure, such as by updating its outdated standards for lead in household paint and soil, and by regulating the largest source of lead emissions into the air, aviation gasoline. If EPA takes seriously its commitment to public health and environmental justice, the agency must end the use of leaded aviation gasoline now. Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It is high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air. Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process. Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded aviation gasoline now. Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas. It is unconscionable that EPA has failed to regulate the largest remaining single source of lead emissions to the air. Regulating lead aircraft gasoline is a major step in fulfilling the Biden-Harris administration's commitments to protect children's health and promote environmental justice.

Comment Number: EPA-HQ-OAR-2022_0389-0451-0001

Commenter Type: Private Citizen

Commenter: Cynthia Hathaway

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to Create rules that TRANSITION away from the use of 100 octane low-lead aviation gasoline (avgas) to the use of 100 octane NO Lead gasoline. Alternative fuel has already been developed. Support stringent testing of these alternatives to be sure of their safety- then implement the rigid use of them by FAA regulations.

Comment Number: EPA-HQ-OAR-2022_0389-0451-0002

Commenter Type: Private Citizen

Commenter: Cynthia Hathaway

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to transition away from leaded avgas as quickly as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0452-0001

Commenter Type: Private Citizen

Commenter: Susan Derry

Organization:

Excerpt Text:

I breathe. Get ride of the lead in the planes. Theres too much flying going on anyway. These fuels must be used in the cleanest process. No Leaded Fuels for Flight!!

Comment Number: EPA-HQ-OAR-2022_0389-0454-0001

Commenter Type: Private Citizen

Commenter: Irene Alexakos

Organization:

Excerpt Text:

Dear Administrator Michael Regan, My family would like to see you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of avgas, the largest source of lead emissions in the country. It's time to do this. It's the moral and right thing to do.

Comment Number: EPA-HQ-OAR-2022_0389-0456-0001

Commenter Type: Private Citizen

Commenter: Caroline Kunitake

Organization:

Excerpt Text:

We need to seriously stop polluting our water , air and land. We are not serving our current and future generations by failing to protect basic human health. We have the resources to shift away from these

dangerous fuels. Please take immediate action today to stop these hazards from endangering human health.

Comment Number: EPA-HQ-OAR-2022_0389-0457-0001

Commenter Type: Private Citizen

Commenter: Susan Stoll

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Although we outlawed lead in our fuel for cars decades ago we still allow leaded fuel in aviation. Our nation needs to adopt rules to eliminate the use of leaded aviation gasoline, or "avgas" now. Exposure to lead is damaging to the health of all living things, especially neurological development in human children. Avgas needs to be banned.

Comment Number: EPA-HQ-OAR-2022_0389-0458-0001

Commenter Type: Private Citizen

Commenter: K. H. Burgess

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize the endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0460-0001

Commenter Type: Private Citizen

Commenter: Thomas Seaman

Organization:

Excerpt Text:

Leaded aviation gasoline is a danger, quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure is responsible for serious illness.

Comment Number: EPA-HQ-OAR-2022_0389-0461-0001

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

I am writing to DEMAND you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0461-0003

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

It's ABSOLUTELY MANDATORY you finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas! If you refuse to do so, we global environmental movements are prepared to hold you more than merely accountable for criminal apathy and avarice and call out your crimes on a global scale, and to SUCH an extent that your career or public reputation will NEVER RECOVER!!!

Comment Number: EPA-HQ-OAR-2022_0389-0462-0001

Commenter Type: Private Citizen

Commenter: W. Liepmann

Organization:

Excerpt Text:

I urge you to take action now to end leaded aviation gasoline, and to eliminate leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0462-0002

Commenter Type: Private Citizen

Commenter: W. Liepmann

Organization:

Excerpt Text:

Please work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0463-0001

Commenter Type: Private Citizen

Commenter: Thomas Filardo

Organization:

Excerpt Text:

Dear Secretary Michael Regan, Over five decades of Family Practice and emergency medicine work, I have seen the mentally-crippling effects of lead poisoning in children and young (mostly) adults, a societal burden disproportionately afflicting the minority and poor echelons of our currently sad society, a situation for which you hold unique powers to curtail for the future of all of us. Please, please!, finalize an endangerment finding for leaded aviation gasoline to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0463-0002

Commenter Type: Private Citizen

Commenter: Thomas Filardo

Organization:

Excerpt Text:

You know the statistics, which I need not reiterate here. You have the power to begin to rectify this unacceptable catastrophe, and I and my practice peers beg you to act.

Comment Number: EPA-HQ-OAR-2022_0389-0464-0001

Commenter Type: Private Citizen

Commenter: Richard Mcdonald

Organization:

Excerpt Text:

(an aerial application of lead, over our entire environment.!) Suggest you "get with the program"!, of impacting the Earth, as lightly as possible with our human presence... by doing what we need to do... in a much more thoughtful way than we have been, since the industrial revolution. Time to get this lead emissions problem to ZERO. by either redesigning the fuel, redesigning the engine so that it works perfectly WITHOUT lead, OR... start riding the bus ! THIS MUST CHANGE.

Comment Number: EPA-HQ-OAR-2022_0389-0465-0001

Commenter Type: Private Citizen

Commenter: Edward Simpson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please do everything now to adopt rules eliminating the use of leaded aviation gasoline, or "avgas". Finalize the endangerment finding now. Children and adults suffer from lead exposure; communities of color have long been harmed while the rest of society ignores them blaming them, their families, their poverty --everything but LEAD. We are grateful we do not live near an airport, but think of the many good people - old and young - who do. The information is clear. Avgas is dangerous. Act now! No more wasted time....and lives! Thank you for caring!

Comment Number: EPA-HQ-OAR-2022_0389-0467-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0468-0001

Commenter Type: Private Citizen

Commenter: Andrew Rosenthal

Organization:

Excerpt Text:

The case against lead is airtight. Why has the EPA not banned it in aviation fuel? Cowardice and greed are the only answers. It is long past the time to do the right thing and improve the health of children across the country immediately.

Comment Number: EPA-HQ-OAR-2022_0389-0469-0001

Commenter Type: Private Citizen

Commenter: Jeremy Ehrlich
Organization:

Excerpt Text:

Dear Administrator Michael Regan, I urge you to ban leaded avgas. Lead emissions are a huge health hazard in this country, and airplane fuel is the largest contributor. I urge EPA to take strong measures to protect public health -- you are the only ones who can do it! -- and move to ban this dangerous fuel. What's good for cars is good for planes: no more leaded gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0472-0001

Commenter Type: Private Citizen

Commenter: Linda Moss

Organization:

Excerpt Text:

It is absolutely unacceptable that our government is purchased by lobbyists and still allowing the use of LEAD in aviation fuel that is spewed down on ALL life, water sources and food sources. The ignorance and greed is overwhelming, with irresponsible and selfish "powers that be" harming even those that they profess to love.

Comment Number: EPA-HQ-OAR-2022_0389-0473-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I strongly support the EPA proposal for a lead endangerment finding for leaded aviation gas. Lead was banned from auto gas more than 25 years ago, and lead in piston-engine aircraft fuel should also be banned immediately. If there is a safe, unleaded aviation gas alternative(s) that currently exists, why aren't we using it?

Comment Number: EPA-HQ-OAR-2022_0389-0476-0001

Commenter Type: Private Citizen

Commenter: Mike Powers

Organization:

Excerpt Text:

As a biologist and former military pilot, I was shocked to learn today that avgas still contains lead! I had assumed that practice had ended when lead was removed from automobile gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0477-0001

Commenter Type: Private Citizen

Commenter: Dillon Heist

Organization:

Excerpt Text:

It's unacceptable that a small number of enthusiasts pollute our communities with lead. In Seattle small

craft routinely fly over public parks, elementary schools, popular shopping areas, and neighborhoods full of innocent civilians unaware of this pollution and risk. The EPA must act to end this source of dangerous pollution!

Comment Number: EPA-HQ-OAR-2022_0389-0479-0001

Commenter Type: Private Citizen

Commenter: Alice Nguyen

Organization:

Excerpt Text:

It's long overdue that EPA adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0479-0002

Commenter Type: Private Citizen

Commenter: Alice Nguyen

Organization:

Excerpt Text:

It is reprehensible that EPA still allows leaded aviation fuel nearly a half century after banning lead in gasoline used in car engines.

Comment Number: EPA-HQ-OAR-2022_0389-0480-0001

Commenter Type: Private Citizen

Commenter: Sarah Kavage

Organization:

Excerpt Text:

I was quite surprised to read this morning that leaded gas was still in use! I thought it had been banned in the 70s! It is well past time to find another fuel for small planes. Here in the Seattle area, that ongoing lead pollution lands in areas already burdened by airport related noise and pollution. We already suffer from worse health outcomes because of it. Taking the lead out of gasoline seems like an easy, obvious, and well overdue win for people's health and the environment.

Comment Number: EPA-HQ-OAR-2022_0389-0481-0001

Commenter Type: Private Citizen

Commenter: Katie Ruthenberg

Organization:

Excerpt Text:

The EPA must act quickly to END the use of leaded aviation fuels to protect public health, especially in children. The EPA will receive a lot of excuses and threats from the aviation and fuel industries to not transition away from leaded fuels, but please do not let that deter you from making the best scientifically-based decisions that will protect and enhance the health of millions of people.

Comment Number: EPA-HQ-OAR-2022_0389-0483-0001

Commenter Type: Private Citizen

Commenter: Margy Laughlin

Organization:

Excerpt Text:

You are way too late for this. Should have been done years ago. No small plane with leaded gas should be allowed to fly.

Comment Number: EPA-HQ-OAR-2022_0389-0484-0001

Commenter Type: Private Citizen

Commenter: Charlie Waugh

Organization:

Excerpt Text:

It's time to stop poisoning those who live near our airports, people. Time to outlaw leaded aviation fuel... immediately.

Comment Number: EPA-HQ-OAR-2022_0389-0486-0001

Commenter Type: Private Citizen

Commenter: Cynthia Ervin

Organization:

Excerpt Text:

Please end the use of leaded aviation fuels now. We know it's toxic and we know it's an example of environmental racism. Especially since those flying small planes are often the wealthiest among us and those suffering the consequences the poorest. Please do the right thing.

Comment Number: EPA-HQ-OAR-2022_0389-0487-0001

Commenter Type: Private Citizen

Commenter: Paula O'Brien

Organization:

Excerpt Text:

I am appalled to think there is any justification for the continued use of leaded fuels. After reading the editorial in the Seattle Times on December 15, 2022 it became clear the EPA has been negligent with respect to the public's health by ignoring this issue. What possible reason could the known harmful effects of lead be ignored for decades? PLEASE EPA -do your job!!

Comment Number: EPA-HQ-OAR-2022_0389-0488-0001

Commenter Type: Private Citizen

Commenter: GrotonAyer Buzz

Organization:

Excerpt Text:

There is no safe level of lead and all non-emergency, non-essential piston driven aircraft burning leaded aviation fuel should be grounded until an unleaded alternative is available. Health of the population

affected by concentrated flight maneuvering and concentrated flight paths should be placed above the hobby piloting community.

Comment Number: EPA-HQ-OAR-2022_0389-0493-0001

Commenter Type: Private Citizen

Commenter: Krissa Dutton-Schandelmaier

Organization:

Excerpt Text:

Let me repeat that, the largest source of lead emissions in the country. That means that this is a problem that needs to be addressed and corrected. When the pandemic was identified as an emergency, unpopular measures were put in place to protect the public. It shouldn't be a pick and choose as to what serious threats are addressed and then measures taken to protect the public and in this case, even worse, the environment. This is a serious problem and even if it means grounding some of these planes, that is what needs to be done. I hope to read soon that there has been action taken to correct the serious problem of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0494-0001

Commenter Type: Private Citizen

Commenter: David Hazen

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Lead is too dangerous to be recklessly used. Use in any fuel is reckless.

Comment Number: EPA-HQ-OAR-2022_0389-0495-0001

Commenter Type: Private Citizen

Commenter: Gregory Hill

Organization:

Excerpt Text:

I was very surprised to learn that leaded gasoline is still being used in aircraft fuel. I had thought that we'd gotten lead out of our energy systems a couple of decades ago.

Comment Number: EPA-HQ-OAR-2022_0389-0496-0001

Commenter Type: Private Citizen

Commenter: Diane Bloom

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded gas in aviation fuel is a known source of contamination. Thus, its elimination seems to be the solution . Proceed to make this a reality

Comment Number: EPA-HQ-OAR-2022_0389-0497-0001

Commenter Type: Private Citizen

Commenter: Jessica Lisovsky
Organization:

Excerpt Text:

I hope the EPA will do the right thing and eliminate lead in aviation fuels. There are safer alternatives that have been available for years! Shame on the small plane fleet and aviation fuel industries for pushing back on this, dragging their feet and allowing the public to be harmed. Outrageous!

Comment Number: EPA-HQ-OAR-2022_0389-0498-0001
Commenter Type: Private Citizen
Commenter: Sharon Enzi
Organization:

Excerpt Text:

I am in disbelief that the EPA has dragged its feet for years on the danger of leaded aviation gas. Really? Why would any rational person believe that leaded gas in cars is a danger to human health but leaded gas in planes is perfectly safe? Would the EPA's inaction have anything to do with the location of most airports with planes using leaded gas-I.e., in communities of color? I urge you to finalize an endangerment finding for leaded aviation gasoline, and I press you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0500-0003
Commenter Type: Private Citizen
Commenter: Carla Campbell
Organization:

Excerpt Text:

Therefore, I am in agreement that lead emissions constitute an endangerment to the public's health. Please do everything in your power to decrease this exposure to lead emissions from aviation.

Comment Number: EPA-HQ-OAR-2022_0389-0501-0001
Commenter Type: Private Citizen
Commenter: Michael Kemper
Organization:

Excerpt Text:

Leaded fuel in aviation is just as damaging to human health as leaded fuel in automobiles. So what's the hang up. Is the public's health not a good reason to eliminate leaded fuels in aviation?

Comment Number: EPA-HQ-OAR-2022_0389-0502-0001
Commenter Type: Aircraft Owner/Operator
Commenter: Lani Hummel
Organization:

Excerpt Text:

I am a pilot and the daughter of a pilot. As a very proactive environmental conservation advocate, I have adopted a lifestyle that minimizes my impact on the planet. I don't like to think that aviation, which brings

so many benefits to mankind, is producing a toxic byproduct that causes great harm to so many of my fellow citizens. Please ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0503-0001

Commenter Type: Private Citizen

Commenter: Ryan Rayburn

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Stop the use of avgas now! No hobbies and pastimes should be dumping lead into the atmosphere for the rest of us to breathe! Leaded gasoline in cars was banned for a reason, why should piston airplanes be treated any differently? I'm urging you to help the cause that everyone will benefit from. We deserve better!

Comment Number: EPA-HQ-OAR-2022_0389-0504-0001

Commenter Type: Private Citizen

Commenter: Sue Chartock

Organization:

Excerpt Text:

I would like to bring to your attention the big need right now to regulate the use of leaded gas used for planes as a goal to reduce and then eliminate it because of the environmental issues with the use of this type of fuel. This change would really make a big deal to everyone. I hope you will give this your undivided attention coming into the new year. It would show that the airline industry is trying to move forward with making traveling better by not harming the environments many of your consumers live in with their families. [FL TEXT REMOVED] Thank you for listening to my feedback. Happy holidays! Good New Year. Sue Chartock Sincerely, Sue Chartock Flushing, NY 11358

Comment Number: EPA-HQ-OAR-2022_0389-0507-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

EPA needs to ban leaded av. gas because the industry is making to effort to upgrade. "Massport has no control over the development or approval of alternative aviation fuels. If something's available, then-you know we don't sell the fuel-the FBO [Fixed Base Operator] would sell the fuel. So it would be up to them if they want to invest that kind of money for whatever the return might be. But I think that's something that's quite a few years down the road," said Amber Goodspeed, Massport airport administrative manager for Hanscom Field.

Comment Number: EPA-HQ-OAR-2022_0389-0508-0001

Commenter Type: Private Citizen

Commenter: John Cullen

Organization:

Excerpt Text:

I know the FAA just care so little, but they have a chance to help save lives and help climate change at same time. Unfortunately I think nothing will be done as usual.but here I go anyway. Tell all your little engine users that leaded fuel will not be available come 2024 and pay up for the unleaded fuel system. Flying is a very expensive hobby and those who do it, can afford it. Now does the FAA want to help the world environment or not?

Comment Number: EPA-HQ-OAR-2022_0389-0515-0001

Commenter Type: Private Citizen

Commenter: Marc Fleisher

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded 'avgas' has got to go. I'm sure you know why. Time to act.

Comment Number: EPA-HQ-OAR-2022_0389-0518-0001

Commenter Type: Private Citizen

Commenter: Theodore Weinreich

Organization:

Excerpt Text:

[FL TEXT REMOVED] p.s. Dear Secretary Michael Regan, It is no accident that [FL TEXT REMOVED] It is a vicious cycle: airports locate where there is cheap land, and neighborhoods inhabited by a population of lower income people that often include people of color, are also located where land is cheap. Children born in these neighborhoods are affected by lead poisoning which decreases mental capacity and health. These children grow to become adults with decreased cognitive abilities and earning potential, and so the cycle continues. I implore you to quickly adopt rules to eliminate "avgas" from being used in the United States, and take this vital step toward eliminating environmental discrimination in America. Sincerely, Theodore Weinreich Miami Beach, FL 33139

Comment Number: EPA-HQ-OAR-2022_0389-0520-0001

Commenter Type: Private Citizen

Commenter: Margaret Kitts

Organization:

Excerpt Text:

I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Exposure to lead can result in devastating impacts on health. , especially in young children. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Banning avgas must be d e now. [FL TEXT REMOVED] This is a serious danger! The time for change is now! Please finalize this endangerment finding as soon as possible and immediately work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Margaret Kitts Lake Forest, CA 92630

Comment Number: EPA-HQ-OAR-2022_0389-0521-0001

Commenter Type: Private Citizen

Commenter: Patrick McKee

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. There are children living near these airports. Just because someone can afford an airplane doesn't give them the right to poison these kids. It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure during childhood can result in devastating impacts on health, and [FL TEXT REMOVED] Leaded avgas presents a strikingly clear equity issue. [FL TEXT REMOVED] Sincerely, Patrick McKee Mercer Island, WA 98040

Comment Number: EPA-HQ-OAR-2022_0389-0522-0001

Commenter Type: Private Citizen

Commenter: Debra Taylor

Organization:

Excerpt Text:

I read that agencies do not count all these emails individually!! Why? I wouldn't sign it if I disagreed with it. This letter is to urge you to end the manufacturing of leaded aviation gasoline!! Please quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Debra Taylor Denver, CO 80246

Comment Number: EPA-HQ-OAR-2022_0389-0523-0001

Commenter Type: Private Citizen

Commenter: Eileen Walz

Organization:

Excerpt Text:

The outsized negative impact of these aircraft's on the environment, the communities near small airports, and the wildlife is NOT worth it. Please ban or increase regulation around these types of aircrafts.

Comment Number: EPA-HQ-OAR-2022_0389-0524-0001

Commenter Type: Private Citizen

Commenter: sharon tkacz

Organization:

Excerpt Text:

I am writing to urge you to adopt rules eliminating the use of leaded aviation gasoline. [FL TEXT REMOVED] Sincerely, sharon tkacz Novelty, OH 44072

Comment Number: EPA-HQ-OAR-2022_0389-0526-0001

Commenter Type: Private Citizen

Commenter: Mary Reed

Organization:

Excerpt Text:

As a concerned citizen, I urge you to finalize an endangerment finding for leaded aviation gasoline and to

quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on both physical and mental health. [FL TEXT REMOVED] Over five million people, including more than 360,000 children under the age of five, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Lead is being deposited in the surrounding waters and soils, adding to contamination. [FL TEXT REMOVED] The time has come to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Mary S. Reed Poultney, VT 05764

Comment Number: EPA-HQ-OAR-2022_0389-0527-0001

Commenter Type: Private Citizen

Commenter: Rona Fried

Organization:

Excerpt Text:

Dear Administrator Michael Regan, I was so surprised when I read that leaded gasoline is still used in aviation! I thought those times were long past. So please finalize an endangerment finding for leaded aviation fuel and quickly adopt rules to finally eliminate this unnecessary, poisonous fuel..

Comment Number: EPA-HQ-OAR-2022_0389-0530-0004

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

The US aviation industry has assumed the role of flight training capital for the world and markets itself world-wide. Students come from China, Vietnam, Thailand, Syria and other countries to train here. Presumably this is cost effective for them - the pollution costs are completely externalized and their home countries don't have to bear that cost. There are alternative fuels. But due to vested self interests, the industry is highly resistant to making this change. This delay is unconscionable! We don't need more studies or data. We need action to protect our children, our own health, and our environment. EPA should make this finding ASAP and expedite the change to lead-free aviation fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0532-0001

Commenter Type: Private Citizen

Commenter: Pamela Osgood

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. Quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Everyone knows that lead is bad for humans and animals and water and air.....bad for life. [FL TEXT REMOVED] Sincerely, Pamela Osgood San Francisco, CA 94110

Comment Number: EPA-HQ-OAR-2022_0389-0536-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health. Over 5 million people live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Sincerely, Elaine Mayer
Minneapolis, MN 55447

Comment Number: EPA-HQ-OAR-2022_0389-0537-0001

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

This issue is important to me as I am sure it is to you as well. Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". This is the largest source of lead emissions in the country. [FL TEXT REMOVED] The time has come! [FL TEXT REMOVED] Thank you for considering my comments. Sincerely, James Boone
Sincerely, James Boone Portland, OR 97229

Comment Number: EPA-HQ-OAR-2022_0389-0539-0001

Commenter Type: Private Citizen

Commenter: Catherine Carter

Organization:

Excerpt Text:

[FL TEXT REMOVED] I think you know all the reasons we're urging this...right? Lead exposure's devastating impacts on health, especially for children. Over 5 million people, including more than 360,000 children under the age of 5, living near at least one of the airports where piston-engine aircraft operate, according to the EPA. They're good reasons. Please let them guide your work, finalize this endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Catherine Carter Cullowhee, NC 28723

Comment Number: EPA-HQ-OAR-2022_0389-0545-0001

Commenter Type: Private Citizen

Commenter: Rachael Bishop

Organization:

Excerpt Text:

[FL TEXT REMOVED] MY NOTE: WTF? I had no idea that the sky above my head was being filled with lead emissions all of my life!!!!!! I was born in 1972, around the time automobile emissions became regulated!!! Why were not the aviation emissions also regulated?? This is horrendous! I am disgusted and really damn mad!!! Sincerely, Rachael Bishop Blaine, WA 98230

Comment Number: EPA-HQ-OAR-2022_0389-0547-0001

Commenter Type: Private Citizen

Commenter: Don Lipmanson
Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please quickly adopt an endangerment finding and rules that prohibit use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0548-0001

Commenter Type: Private Citizen

Commenter: Edward Funnell

Organization:

Excerpt Text:

I believe that the EPA should move with all due haste to establish the health hazards that are caused by leaded aviation fuel. Regulations to address the public health hazards from the use of leaded fuel in aviation are within the public interest and should be expedited. Leaded fuel should be banned, without exception, as soon as possible. Speaking not only as a person with both cardiovascular and central nervous systems, but as a parent of other humans who also have these systems, I am strongly in favor of regulations which would end the practice of distributing into the air substances which are known poisons to these systems.

Comment Number: EPA-HQ-OAR-2022_0389-0549-0001

Commenter Type: Private Citizen

Commenter: Margaret Barrett

Organization:

Excerpt Text:

No doubt you already know how dangerous lead emissions are, especially to children. And no doubt you already know that aviation gasoline, or "avgas", is the largest source of lead emissions in the country. I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of it. [FL TEXT REMOVED] Sincerely, Margaret Barrett Malvern, PA 19355

Comment Number: EPA-HQ-OAR-2022_0389-0550-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Riebschlaeger

Organization:

Excerpt Text:

Lead and its deadly impacts on human health in every form is well known because of the sad stories about whole cities and their children, suffering from its effects. But the biggest source of lead-burning fuel goes unnoticed: aviation fuel. I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Elizabeth Riebschlaeger Victoria, TX 77901

Comment Number: EPA-HQ-OAR-2022_0389-0552-0001

Commenter Type: Private Citizen

Commenter: Raymond Smith

Organization:

Excerpt Text:

[FL TEXT REMOVED] Remember as I was growing up the oil industry charged us more to put more lead in gasoline for premium. Now they charge us more to remove lead from the gasoline! There is no reason we cannot require a lead reduction in aviation fuel! The time has come to respond to this industry for a reduction or removal of lead from this aviation fuel!! Thanks RPS [FL TEXT REMOVED]
Sincerely, Raymond Smith Chandler, AZ 85248

Comment Number: EPA-HQ-OAR-2022_0389-0554-0001

Commenter Type: Private Citizen

Commenter: JP Herman

Organization:

Excerpt Text:

The hazards from lead particularly to our kids are well established so please do what is necessary to eliminate lead pollution. We must assume the fuel from these little planes contribute heavily to local lead levels clearly endangering our citizens so please propose and adopt an endangerment finding so we can move forward with appropriate regulation

Comment Number: EPA-HQ-OAR-2022_0389-0557-0001

Commenter Type: Private Citizen

Commenter: Carol Landis

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and then quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Even worse, [FL TEXT REMOVED] Sincerely, Carol Landis Johnson
City, TN 37601

Comment Number: EPA-HQ-OAR-2022_0389-0558-0001

Commenter Type: Private Citizen

Commenter: John Pooley

Organization:

Excerpt Text:

The EPA should be ashamed that this rule was not enacted decades prior. Benjamin Franklin described the dangers of lead exposure in a 1786 letter to Benjamin Vaughan. More than 200 years later we are still needlessly subjecting children to an insidious poison

Comment Number: EPA-HQ-OAR-2022_0389-0560-0001

Commenter Type: Private Citizen

Commenter: Sheri Kuticka

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can impact health. Lead exposure is responsible for illness in adults, including cancer and cardiovascular disease. [FL TEXT REMOVED] Children who live near airports have higher levels of lead in their blood.. [FL TEXT REMOVED] Please finalize this endangerment finding and ban leaded avgas. Sincerely, Sheri Kuticka Concord, CA 94518

Comment Number: EPA-HQ-OAR-2022_0389-0562-0001

Commenter Type: Private Citizen

Commenter: Louise Stanton

Organization:

Excerpt Text:

Please quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country! How can this not be eliminated already? [FL TEXT REMOVED] Thank you for acting on my behalf. Sincerely, Louise Stanton Santa Monica, CA 90404

Comment Number: EPA-HQ-OAR-2022_0389-0563-0001

Commenter Type: Private Citizen

Commenter: Kathryn McKenzie

Organization:

Excerpt Text:

I live in Superior, WI near a municipal airport with smaller plane flying in and out. I also live near a pipeline and with a mile of an oil refinery. Can't the government give me at least some respite and get rid of leaded gas for small planes? Elementary and Middle Schools are nearby. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0564-0001

Commenter Type: Private Citizen

Commenter: Laurie Chin Sayres

Organization:

Excerpt Text:

Please ban leaded aviation gas. I live by the Rocky Mountain Metropolitan Airport and they fly multiple planes at a time over our homes for 12-15 hours non-stop. With additional flying time outside of the non-stop time. This is a densely populated area including several schools with young children. The airports will not self-regulate. EPA, please help keep us safe. This is insane that it's even a topic of conversation with all the research we have. Please act swiftly.

Comment Number: EPA-HQ-OAR-2022_0389-0566-0001

Commenter Type: Private Citizen

Commenter: Suzan Fleischman

Organization:

Excerpt Text:

Dear Administrator Michael Regan, It's a shame that the Government is/has been allowing these types of fuels to exist with the knowledge that you/we are harming so much/so many with the highest lead emissions from Aircraft. It's time to stop using aviation fuels and get an alternative solution to eliminate further harm to our society. If you would please make this a priority for a better future and not allow this to occur again. I thank you for making this happen. Respectfully, Suzan Fleischman . a memphian . a texan . and a floridian .

Comment Number: EPA-HQ-OAR-2022_0389-0567-0001

Commenter Type: Private Citizen

Commenter: Gary Platner

Organization:

Excerpt Text:

I have been in the airplane business for 55 years. From military to airline to civilian flying and I have a pretty good understanding of airplanes. The number one priority in the aviation business is safety, and right now the trade off between safety and outlawing 100LL is huge. A lot of research and thought went into a paper written and posted by CSA (Coalition for Sustainable Aviation). Reading this document and having been in the business fo 55 years, I can unequivocally say I agree with everything the author says. He has done an amazing amount of research to back up every point he makes. I cannot say it any better than this document so please read it. It will educate you way beyond the mass hysteria that seems to be going on today. Also the bottom line is the EPA has no authority to ban 100LL in airplanes. That falls under the prevue of the FAA.

Comment Number: EPA-HQ-OAR-2022_0389-0571-0001

Commenter Type: Private Citizen

Commenter: Brian Hoover

Organization:

Excerpt Text:

I do not agree that the epaulets has the authority to regulate aircraft and the fuel that they are designed and certified for by the FAA. Furthermore, the proposed elimination of 100ll creates a public hazard in the form of engine failure in piston aircraft by removing the fuel they were designed for. As these aircraft will come down, the result crash endangers the public as well. The CSA (Coalition for Sustainable Aviation) has a very good paper submission on this and I whole hearted agree with it. In summary, the EPA does not have the authority to regulate aircraft, nor should 100ll be removed without a replacement that is suitable for all piston engined aircraft

Comment Number: EPA-HQ-OAR-2022_0389-0572-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I'm commenting regarding LEAD FUEL used at Beverly Airport in Beverly Ma. And all other airports across the country. Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead form piston driven airplanes over our

neighborhoods, schools and play grounds. We urge the FAA to support communities, and EPA in BANNING AVGAS NOW. Every day AVGAS (LEADED FUEL) is used communities across the country are breathing in Lead. Please review section 231(a) of the clean air act.

Comment Number: EPA-HQ-OAR-2022_0389-0574-0001

Commenter Type: Private Citizen

Commenter: Sherman Lewis

Organization:

Excerpt Text:

Leaded aviation gasoline damages the environment and human health. Please make a finding consistent with the science. Adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure at all ages causes serious illness, including cancer and cardiovascular disease. [FL TEXT REMOVED] Banning lead cannot wait. [FL TEXT REMOVED] Leaded gasoline was banned in most cars 25 years ago, but lead is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Sincerely, Sherman Lewis Hayward, CA 94542

Comment Number: EPA-HQ-OAR-2022_0389-0575-0001

Commenter Type: Private Citizen

Commenter: Ruth Fruland

Organization:

Excerpt Text:

Lead is poison. Finalize the endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the USA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Ruth Fruland Seattle, WA 98115

Comment Number: EPA-HQ-OAR-2022_0389-0576-0001

Commenter Type: Private Citizen

Commenter: Ulysses Lateiner

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As the parent of a 6-month-old child, the public health hazards associated with lead are particularly concerning to me.

Comment Number: EPA-HQ-OAR-2022_0389-0576-0002

Commenter Type: Private Citizen

Commenter: Ulysses Lateiner

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000

piston-engine aircraft. Please finalize an endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0579-0003

Commenter Type: Private Citizen

Commenter: Pamela Weinstein

Organization:

Excerpt Text:

Money cant assuage the guilt of not being better, uncorrupted stewards of our country. Greener is usually cost prohibitive , this switch to, unaded fuel for jets, costs are nominal, yet you refuse to do it. This has opened my eyes to the reality: It isn't about the cost of changing the way we use energy, bcause you have a way to lower lead emissions, that would cost next to nothing. It is really what we feared most. You at EPA are in the pockets of those who care little for the poorest, wildlife and oceans. We depend on you to "protect" the environment, but instead you are protecting those who are destroying it. I hope the kickbacks or whatever they're offering you, outweigh the devastation you are doing nothing to stop. I've always heard that the EPA is a corrupt institution and not mandating something that would not be cost prohibitive, but keeps some people extremely wealthy is an inaction, that proves it. I'm not some idealist who doesn't understand the enormous obstacles that stand in the way of changing the way we've used energy since the 1st pool of bitumen was burned. To not make a change that costs nothing but gives huge profits to few, while many, many more suffer its effects, is as close to criminal as your organization gets. I will be sure to share this newfound knowledge with everyone I can and people who didn't take a stand because of the costs of change ,will d so when they are made aware that the EPA doesn't enforce changes that cost little but lines the pockets of the wealthiest.

Comment Number: EPA-HQ-OAR-2022_0389-0580-0001

Commenter Type: Private Citizen

Commenter: Curt Johnson

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0581-0001

Commenter Type: Private Citizen

Commenter: Pamela Weaver

Organization:

Excerpt Text:

It is unbelievable to me, that with our knowledge of the dangers and high toxicity of lead, that this fuel is still being used. Toxins in the air wind up in our water and soils, causing further contamination. It is time we clean this up. The toxic soup we have been creating is poisoning all of us and everything, even when we know better.

Comment Number: EPA-HQ-OAR-2022_0389-0582-0001

Commenter Type: Private Citizen

Commenter: Jo B.

Organization:

Excerpt Text:

This is just common sense. We know the dangers of using leaded aviation gas. There is a better alternative. We use unleaded gas for our cars & trucks - any vehicle on land - so why are we still allowing aviation use of this toxic leaded fuel. Lets get this corrected now!

Comment Number: EPA-HQ-OAR-2022_0389-0583-0001

Commenter Type: Private Citizen

Commenter: Michael Carpenter

Organization:

Excerpt Text:

We have known for many years that lead emissions are a damaging pollutant in the environment and have accordingly banned lead from automotive gasoline for over 25 years. It is now past time that we banned lead from aviation gasoline as well. Airplane manufacturers have had plenty of time to develop technology to utilize unleaded instead of leaded gas and it is time to force their hands to incorporate such technology

Comment Number: EPA-HQ-OAR-2022_0389-0585-0001

Commenter Type: Private Citizen

Commenter: Angela Weiss

Organization:

Excerpt Text:

Ban leaded gasoline. I realize nobody cares about anyone except themselves in the US so maybe we could do it to save our own necks. We are at the point of extinction with global warming unless you like 120 degree temperatures and no water. We don't care about kids either. We just want to take womens' rights by protecting a fetus but who cares if the kid gets brain damage from lead poisoning because they live by the airport. Yes, I am a woman and yes I am angry and yes I will expatriate somewhere civilized without a bajillion guns and where women still have rights and are equal when I retire. I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0586-0001

Commenter Type: Private Citizen

Commenter: John Miller

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please eliminate the use of leaded aviation fuel as quickly as possible. With all the terrestrial efforts to avoid and clean up lead pollution, it's simply incomprehensible to me that we still allow planes to spew it into our air. Leaded fuel cannot be phased out quickly enough.

Comment Number: EPA-HQ-OAR-2022_0389-0587-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Willis
Organization:

Excerpt Text:

I write to you today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0588-0001
Commenter Type: Private Citizen
Commenter: Terry Burns
Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". As a physician I learned long ago of the hazards of lead exposure, particularly during childhood, which can result in lifelong mental deficiency. Lead exposure is responsible for serious illness in adults as well, including cancer and cardiovascular disease. This was all known, and IGNORED, even at the time leaded "ethyl" gasoline was introduced for motor vehicles back in the 1930s. Millions of people suffered for decades until leaded gasoline was banned in most vehicles 25 years ago. I was frankly shocked to learn lead containing avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports, and is now the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0591-0001
Commenter Type: Private Citizen
Commenter: Susan Rodriguez
Organization:

Excerpt Text:

Why is the name of all that is holy, would you not totally stop the usage of this gas??? Money? Is the only air we have to breathe worth money now? Because it's getting past the tipping point for greed over life. And hello. You are now in charge of some major decisions.

Comment Number: EPA-HQ-OAR-2022_0389-0594-0001
Commenter Type: Private Citizen
Commenter: Lisa Mills
Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Leaded gasoline was rightly banned in most cars 25 years ago. Why is avgas is still allowed in aviation? [FL TEXT REMOVED] As you know, [FL TEXT REMOVED] We should not allow this to continue! I urge you to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0595-0001

Commenter Type: Private Citizen

Commenter: Edward Simpson

Organization:

Excerpt Text:

Please finalize the endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. You know the horrors of lead exposure. Sadly children in poor communities, and often Black children, are victims of the lead poison. They have no chance once they have been exposed, usually most of their childhood. Makes us wonder if these were white, wealthy communities, would this still be an issue? Of course white wealthy communities would never allow such poisons in their neighborhoods. Before more lives are forever harmed

Comment Number: EPA-HQ-OAR-2022_0389-0600-0001

Commenter Type: Private Citizen

Commenter: Linda Agerbak

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022_0389-0601-0001

Commenter Type: Private Citizen

Commenter: Frances Walker

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please stop leaded a gas. Leaded gas for cars was banned 25 years ago. Avgas is responding for 70% of lead released into atmosphere. It's past time to disallow it. Sincerely, Frances K Walker Sincerely, Frances Walker Gig Harbor, WA 98335

Comment Number: EPA-HQ-OAR-2022_0389-0602-0001

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

I urge you to finalize endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0602-0003

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

Please! Finalize this endangerment finding as soon as possible and work with Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0603-0001

Commenter Type: Private Citizen

Commenter: Mark Grassman

Organization:

Excerpt Text:

I've lived in Indiana all my life. There are lots of farms in this great State; Indiana doesn't just grow corn and soybeans, it is a leading producer of popcorn. Our farms use lots of chemicals on these crops. They spray pesticides from planes to control weeds and bugs. These chemicals possibly containing agent orange can't be good for pollinators like bees. Furthermore, these planes run on lead-based aviation gasoline! I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022_0389-0604-0001

Commenter Type: Private Citizen

Commenter: Peter Macfarlane

Organization:

Excerpt Text:

If leaded gasoline is a sufficient danger to warrant its being banned from use in automobiles, there can be no rational reason for allowing its continued use in aircraft. It is no less of a danger. Any release of lead into the atmosphere represents a health hazard. I therefore urge you to finalize an endangerment finding for leaded aviation gasoline ("avgas") and to quickly adopt rules eliminating its use. This is the largest source of lead emissions in the country, and lead exposure, particularly during childhood, can result in devastating impacts on health, not least on neurological development. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0605-0001

Commenter Type: Private Citizen

Commenter: Torger Johnson

Organization:

Excerpt Text:

Now is the time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gas. Lead contamination currently being released by humans can be reduced by 70% through this one action. More than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0605-0002

Commenter Type: Private Citizen

Commenter: Torger Johnson
Organization:

Excerpt Text:

] Leaded gasoline was banned in most cars 25 years ago, but leaded aviation fuel is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Please do not wait any longer to finalize this endangerment finding and work with the FAA to ban leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0608-0001
Commenter Type: Private Citizen
Commenter: Stephen Bailey
Organization:

Excerpt Text:

THE FACT THAT AVGAS S T I L L ! CONTAINS L E A D ! IS SIMPLY I N S A N I T Y I N A C T I O N !!! E N O U G H!!!!!!!!!!!!!!!!!!!! S T O P P O I S O N I N G O U R W O R L D !!!! P E R I O D!!!

Comment Number: EPA-HQ-OAR-2022_0389-0609-0001
Commenter Type: Private Citizen
Commenter: Richard Handler
Organization:

Excerpt Text:

Dear Administrator Michael Regan, Lead need not be in high octane aviation gasoline. Lead is a serious environmental pollutant and lead oxide deposits are harmful to engines. We produce high octane gasoline without adding lead. There is need for an exception in aviation fuels. Sincerely, Richard Handler
Jacksonville, OR 97530

Comment Number: EPA-HQ-OAR-2022_0389-0611-0004
Commenter Type: Private Citizen
Commenter: Pamela Holley-Wilcox
Organization:

Excerpt Text:

To protect public health, please finalize this endangerment finding right away and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0613-0001
Commenter Type: Private Citizen
Commenter: Constance Jackson
Organization:

Excerpt Text:

We must do our part to help every human on this Planet. Already, Oceans are rising affecting those living in Costal areas by Billions in higher Insurance costs for Businesses and homeowners. The once in a Hundred years flooding, Hurricanes, are occurring more often than once every hundred years. We can't wait. Please ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0614-0001

Commenter Type: Private Citizen

Commenter: Leslie Sand

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health, including with cancer.

Comment Number: EPA-HQ-OAR-2022_0389-0614-0002

Commenter Type: Private Citizen

Commenter: Leslie Sand

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, and we need to do the same with aviation.

Comment Number: EPA-HQ-OAR-2022_0389-0615-0001

Commenter Type: Private Citizen

Commenter: Joan Donovan

Organization:

Excerpt Text:

Please I urge you to finalize an endangerment finding for leaded aviation gasoline (avgas) and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease!! Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0617-0001

Commenter Type: Private Citizen

Commenter: Lex Nino

Organization:

Excerpt Text:

Given how seriously it impacts children's health, I wholeheartedly support the EPA's proposal to ban lead emissions from aircraft engines that run on leaded gasoline. Statistics from the study mentioned in Sections III A and V show that lead exposure has negative neurological and cognitive consequences on children. Since this legislation supports the health and future well-being of children, we need to make an effort to complete this proposal. We need the EPA to make certain that the thesis proposal is heard and that action is met. We must all work together to emphasize how crucial it is to stop using leaded gasoline in airplanes for the sake of everyone's health and the safety of adolescents. This proposal allows for health benefits, and I trust the EPA to take action on this proposal to keep the people safe.

Comment Number: EPA-HQ-OAR-2022_0389-0621-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Ann Dowds

Organization:

Excerpt Text:

It is a known health problem for all people especially children. Our nation has eliminated lead from most vehicles, pipes, paint and solder used in manufacturing. Pediatricians across our country tested children for lead because China had used at point lead paint on toys! The health consequences can not be ignored and have a healthy economy especially since Covid is still a concern for people with underlying health issues. 2020 has proven to have a healthy economy you need a healthy population. Today my daughter is walking to and from school with airplanes flying into Florida for tourist season. It shouldn't be a Health Risk to take a walk for anyone. Please Ban aviation gasoline

Comment Number: EPA-HQ-OAR-2022_0389-0628-0001

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

I am writing today to ask you to finalize an endangerment finding for leaded aviation gasoline. In addition, I ask you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0628-0003

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas to protect our children and their access to a healthy future.

Comment Number: EPA-HQ-OAR-2022_0389-0629-0001

Commenter Type: Private Citizen

Commenter: Kelly Doolittle

Organization:

Excerpt Text:

I have just been learning about this issue concerning leaded aviation fuel. I never knew about this, so I am glad that EarthJustice and other pro-environmental health and safety organizations have been bringing it to the forefront. That's why I'm writing to you today. I want to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0631-0001

Commenter Type: Private Citizen

Commenter: Joyce King

Organization:

Excerpt Text:

Please quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022_0389-0631-0002

Commenter Type: Private Citizen

Commenter: Joyce King

Organization:

Excerpt Text:

Why, when leaded gasoline was banned in most cars 25 years ago, is avgas still used today in nearly 170,000 piston-engine aircraft across 20,000 airports?

Comment Number: EPA-HQ-OAR-2022_0389-0632-0001

Commenter Type: Private Citizen

Commenter: Mark Petzold

Organization:

Excerpt Text:

I was surprised to learn this. After all, leaded gas was banned in cars in 1975. We know the damage lead does, yet it's been allowed to go on. There are so many hazardous chemicals the EPA just ignores or is molasses slow to act on. It's time for strong action.

Comment Number: EPA-HQ-OAR-2022_0389-0634-0001

Commenter Type: Private Citizen

Commenter: Jessica Kuzmier

Organization:

Excerpt Text:

There are many reasons to ban avgas and convert to alternative fuels. As you know, one chief concern about avgas is the lead in its properties. This in itself causes issues with environmental justice.

Comment Number: EPA-HQ-OAR-2022_0389-0635-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I fully support the EPA's decision to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating its use. Avgas is a known toxic substance that poses a significant risk to human health and the environment. Its continued use as the primary fuel for small aircrafts is a major source of lead emissions in the country, contributing to air pollution and negative health effects such as brain

damage, developmental delays and cancer. The elimination of avgas is a necessary step in protecting public health and ensuring a cleaner and healthier environment for future generations. The use of unleaded fuels, such as GAMI, is a viable alternative that has been proven to be safe and effective for small aircrafts. Furthermore, the adoption of rules eliminating avgas would also align with global efforts to reduce lead emissions and promote sustainable aviation. Other countries have already phased out the use of leaded avgas and it is time for the US to catch up and take action. In addition, the use of unleaded fuels can also bring economic benefits for small aircrafts owners and operators, as unleaded fuels are typically cheaper and more widely available than avgas. In conclusion, finalizing an endangerment finding for leading aviation gasoline and adopting rules eliminating its use is a crucial step in protecting public health and the environment. I strongly support the EPA's decision and urge for its swift implementation.

Comment Number: EPA-HQ-OAR-2022_0389-0639-0001

Commenter Type: Private Citizen

Commenter: Carl Potter

Organization:

Excerpt Text:

To just stop the use of 100 LL (low lead) aviation fuel usage without a direct replacement will wreck much of the general aviation economy. This is reckless use of government oversight and should be dealt with carefully.

Comment Number: EPA-HQ-OAR-2022_0389-0643-0001

Commenter Type: Private Citizen

Commenter: Hasibe Caballero-Gomez

Organization:

Excerpt Text:

There is no safe level of lead exposure. Even small amounts of lead can cause permanent health effects, and lead is a highly persistent pollutant. That means as long as it's dispersed into our atmosphere it will remain in our soils for centuries unless the soil is remediated, which is unlikely due to high costs. Therefore, for the safety and well-being of the public, and in order to avoid the further disproportionate damage to non-white children, leaded fuel for aircraft engines should be banned.

Comment Number: EPA-HQ-OAR-2022_0389-0650-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary. o The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. o By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case.

<https://download.aopa.org/advocacy/2023/Niknam%20Nickraves%20Declaration.pdf> o The banning of certain fuels at airports will and has resulted in misfuelling of aircraft:

<https://download.aopa.org/advocacy/2023/Niknam%20Nickraves%20Declaration.pdf> o

Comment Number: EPA-HQ-OAR-2022_0389-0659-0001

Commenter Type: Private Citizen

Commenter: Peter Roelands

Organization:

Excerpt Text:

Pollution control is important and that is why the industry is working on lead-free high octane gasoline. What the EPA should do is to facilitate the implementation of lead-free aviation gasoline before talking about eliminating it. And push the FAA in allowing high octane automotive gas in more aviation engines.

Comment Number: EPA-HQ-OAR-2022_0389-0660-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The EPA says that "The most important step parents, doctors, and others can take is to prevent lead exposure before it occurs. We know that small piston-engine planes use lead-based avgas. We know that for the vast majority of the piston-engine fleet, alternative fuels containing no lead can be used with no modification to the engine. We know that these planes fly over our communities with no limits. It's time to take the advice of the EPA in addressing lead exposure for children in our communities, as well as others, and advocate vociferously for the immediate replacement of leaded fuels for aviation. The FAA has given itself 8 years to phase out leaded fuel - but we've heard that for decades now and no change has taken place. Given that lead is a known hazard to health, especially to the health and development of children, why isn't something being done to address this issue? The time is now. Alternative fuels exist; electric planes are being developed; air traffic can be routed over areas that will less directly impact the health of people below. There is no excuse for a lack of action or delay on immediately implementing these changes. No further study, no air testing, no additional distractions will change the fact that lead is fundamentally harmful to the health of the environment and everyone living in it, and every single moment of delay is just thousands and thousands of pounds being breathed-in and accumulating towards catastrophic health damage to every single soul that ingests it. No more excuses, no more delays.

Comment Number: EPA-HQ-OAR-2022_0389-0661-0001

Commenter Type: Private Citizen

Commenter: Stephanie Emery

Organization:

Excerpt Text:

I am writing to urge you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure not only has huge impacts on children's health but is responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0661-0002

Commenter Type: Private Citizen

Commenter: Stephanie Emery

Organization:

Excerpt Text:

It's critical that you finalize this endangerment finding as soon as possible and work with the FAA to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0665-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I would urge against the banning of leaded aviation fuel. The coalition for sustainable aviation (CSA) offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public

Comment Number: EPA-HQ-OAR-2022_0389-0666-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Regulating 100LL by removing lead from fuel prematurely will not achieve any positive stated objective. It will, however will destroy general aviation once and for all. The mythical theories that the world will be saved if but only the EPA destroyed aviation by ending access to fuels, will never be measurable. The EPA needs to be dismantled for lack of value. Those involved in regulating 100LL out of existence should be fired and never be allowed to serve in office again. Even if GA is slow to react to these fly by night regulations, the community will activate and vote out those involved in destroying GA.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

Throwing out the baby with the bathwater is not the answer. Look below to see a solution path before cutting general aviation off at the knees. It's not just wealthy people with toys. General aviation touches many. Supplying a stream of future airline pilots among those. CSA offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public. The solution is simple, move the runup area away from the property boundary. The Solution is Dilution. There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive

and simply not necessary. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case.

Comment Number: EPA-HQ-OAR-2022_0389-0669-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Cathy Page

Organization:

Excerpt Text:

The banning of certain fuels at airports will and has resulted in misfuelling of aircraft:

Comment Number: EPA-HQ-OAR-2022_0389-0672-0001

Commenter Type: Private Citizen

Commenter: Renee Christian

Organization:

Excerpt Text:

Please do the right thing and get the lead out of av gas. We live near a metropolitan airport that constantly flies trainer prop planes over our neighborhood - all are burning leaded fuel. I'm afraid to spend time outdoors anymore. Please end this nightmare.

Comment Number: EPA-HQ-OAR-2022_0389-0677-0002

Commenter Type: Private Citizen

Commenter: Hope Nelson

Organization:

Excerpt Text:

This is all unnecessary as there is unleaded aviation fuel available right now. The big jets use it but the piston plane owners have been resistant. We took the lead out of automotive engines long ago. We need to do exactly the same with piston planes. They should be required to make the changes needed to use unleaded fuel. This should happen immediately as it has taken far too long already!

Comment Number: EPA-HQ-OAR-2022_0389-0678-0002

Commenter Type: Private Citizen

Commenter: Peter Ewert

Organization:

Excerpt Text:

Given the serious health risks posed by lead exposure, it is crucial that the Environmental Protection Agency (EPA) takes action to address this issue at airports. This may include implementing regulations to limit, or eliminate, the use of leaded aviation fuel, as well as implementing measures to minimize exposure to lead for children living near airports. I urge you to take this matter seriously and to take action to protect the health and well-being of our nation's children.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0001

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0003

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

The Environmental Protection Agency must take timely action to protect the hundreds of thousands of children being exposed to airborne lead daily-increasing the likelihood of detrimental health impacts, including nervous system disorders and learning disabilities. The impact of lead on public health, especially our children's health, has gone on way too long. The Environmental Protection Agency must find that lead emissions from general aviation aircraft endangers public health and welfare and initiate a rulemaking to eliminate lead from general aviation as soon as possible. There is no safe level of lead exposure, and it is long past time to address the lead emitted from small aircraft.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0004

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

The Environmental Protection Agency needs to move forward immediately to finalize the endangerment finding regarding leaded gas for piston-engine aircraft in the United States and work with the Federal Aviation Administration to quickly ban leaded avgas. As the largest source of airborne lead emissions, it is time you address the critical health issues that this fuel causes to people, communities, and the planet.

Comment Number: EPA-HQ-OAR-2022_0389-0691-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Quiet Communities, Inc.

Excerpt Text:

On behalf of Quiet Communities: An endangerment finding by the EPA would give critical impetus towards a phased-out ban on leaded aviation fuel. A ban is long overdue and must be achieved as quickly possible.

Comment Number: EPA-HQ-OAR-2022_0389-0698-0001

Commenter Type: Advocacy Organization

Commenter: Annakaren Ramirez
Organization: Pacoima Beautiful

Excerpt Text:

I support the EPA's rulemaking in compliance with published requirements, to eliminate lead from aviation gasoline and supporting EPA's endangerment finding on leaded aviation gasoline. Our community has been burdened for decades by the impact of leaded aviation fuel, specifically from the whiteman airport in Pacoima. The private airplanes that operate out of Whiteman airport use leaded aviation fuel and the airport itself stores and sells leaded aviation fuel. There is no safe level of lead exposure. Even small amounts of lead can cause serious and permanent health effects, particularly in children. Studies show that millions of people live close to general aviation airports and are exposed to lead emissions from piston-engine aircraft on a daily basis. This is an environmental justice and public health crisis.

Comment Number: EPA-HQ-OAR-2022_0389-0702-0001
Commenter Type: Advocacy Organization
Commenter:
Organization: Latinos Unidos Por Una Nueva America

Excerpt Text:

I urge the EPA to protect our communities and regulate lead airplane fuel

Comment Number: EPA-HQ-OAR-2022_0389-0703-0002
Commenter Type: Aircraft Owner/Operator
Commenter: Geoffrey Swain
Organization:

Excerpt Text:

It is essential that leaded aviation fuel be outlawed at the earliest practical opportunity, AND it is important to avoid unintended consequences in our regulatory steps toward eliminating leaded aviation fuel. One important unintended consequence to be particularly aware of is related to banning leaded aviation fuel sales at airports before a fleetwide unleaded fuel alternative is available. That is because many aircraft currently require leaded fuel, and do not have an acceptable alternative currently available. Prohibiting its sale at one location means that all the aircraft based there that require it will now have to fly to other airports in order to get it. That means they will emit MORE lead, and expose more children, not only at that particular airport, but also at the other airport(s) to which they must fly in order to get the fuel their engines require.

Comment Number: EPA-HQ-OAR-2022_0389-0705-0001
Commenter Type: Aircraft Owner/Operator
Commenter: Rob Reece
Organization:

Excerpt Text:

In my opinion: GA (General Aviation) faces no bigger threat today than EPA's current effort to gain authority over aircraft and aviation fuel. This is being done under the auspices of delivering Environmental Justice by removing lead from AvGas. On the surface, removing lead sounds like a good idea, but make no mistake a mandated approach to lead removal would be only the first step in a litany of

changes that would soon follow. The real threat comes in the fact that, if EPA is successful, all piston driven aircraft would now be under the authority of two different government agencies, both FAA and EPA. It is no understatement to say that the future of GA hangs in the balance.

Comment Number: EPA-HQ-OAR-2022_0389-0705-0002

Commenter Type: Aircraft Owner/Operator

Commenter: Rob Reece

Organization:

Excerpt Text:

CSA (Coalition for Sustainable Aviation) is a non-profit organization formed for the purpose of advocacy on behalf of pilots today - and more importantly for a sustainable GA future. They have more than 35 years of experience in this area and I completely agree with their finds from the data collected by the EPA. CSA offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. If lead emissions from aircraft exhaust are indistinguishable from background levels of lead, then it stands to reason that aircraft emissions are not endangering the public. Any area outside of the Cone of Distinguishable Aviation Lead Emissions (CODALE) cannot reasonably be expected to endanger the health or welfare of the public. The solution is simple, move the runup area away from the property boundary. The Solution is Dilution. There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case.

<https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf> o The banning of certain fuels at airports will and has resulted in misfuelling of aircraft:

<https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf> o Lead emissions today are 425 times less than lead emissions of the 1970's. Any realistic endangerment to the public from lead emissions has already been addressed.

Comment Number: EPA-HQ-OAR-2022_0389-0711-0001

Commenter Type: Private Citizen

Commenter: Brandon Jewett

Organization:

Excerpt Text:

Mini Aircraft, including Vintage, Aircraft require a lead in the fuel for the engines to operate safe. Eliminating lead in aviation fuel will only further compromise. Aviation safety. This does not serve the general public in anyway!!

Comment Number: EPA-HQ-OAR-2022_0389-0715-0001

Commenter Type: Private Citizen

Commenter: Mark Zuberek

Organization:

Excerpt Text:

This exercise with the comments from the general public to the EPA is an example of what our federal

agencies should be doing. The lead fuel issue has been ongoing for 2030 years and has not been addressed and for that reason our children and now our seniors are feeling the effects of the leaded fuel and the fumes generated by small engines. Therefore I congratulate the EPA but it has to go much further it has to ban the leaded fuel immediately to reduce or eliminate the health dangers to our children and seniors especially. Our small town of Danvers Massachusetts has been experiencing an influx of number of trips at the Beverly airport Beverly Massachusetts which is Cole owned and located Partly in Danvers we are afraid of the health issues that may be coming to our children and to our seniors. Your efforts on this matter are appreciated however as I said earlier it needs to stop now and not wait till the engine mechanical issues are addressed because of the different fuel consistency. We deserve to escape any future lead cloud.

Comment Number: EPA-HQ-OAR-2022_0389-0717-0001

Commenter Type: Private Citizen

Commenter: Jonathan Esty

Organization:

Excerpt Text:

I find it very strange that lead compounds are still being used by the aviation industry since it has been 25 years since this additive was banned for automobiles. It is high time the aviation industry catch up to autos in eliminating this environmental destructive chemical. Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0719-0002

Commenter Type: Private Citizen

Commenter: Barbara Fuoco

Organization:

Excerpt Text:

Please finalize the endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0720-0001

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

While the use of leaded gasoline in most cars was banned 25 years ago, leaded aviation gasoline is still used in nearly 170,000 piston-engine aircraft across 20,000 airports. Please finalize an endangerment finding for leaded aviation gasoline and quickly put in place rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0720-0002

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have higher levels of lead in their blood. It's time to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0721-0001

Commenter Type: Private Citizen

Commenter: Michelle Williams

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0726-0001

Commenter Type: Private Citizen

Commenter: Dwight Johnson

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0727-0001

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline. This cannot wait.

Comment Number: EPA-HQ-OAR-2022_0389-0727-0002

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

I urge you to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0730-0001

Commenter Type: Private Citizen

Commenter: Sheila Macmanus

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline --the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0731-0001

Commenter Type: Private Citizen

Commenter: K Christopher

Organization:

Excerpt Text:

I am writing your Office urging you & your Staff to finalize an endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. We don't seek to eat Lead, We don't seek to drink Lead, We don't offer Lead to Loved ones & family during the Holidays, so it doesn't make sense that we should deliberately & knowingly embrace a practice by our Federal Government to BREATHE LEAD either. Lead exposure, particularly during childhood, can result in *devastating* & often times irreversible impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0731-0002

Commenter Type: Private Citizen

Commenter: K Christopher

Organization:

Excerpt Text:

I look to your office to Finalize this endangerment finding as soon as possible, and coordinate with the Federal Aviation Administration to quickly enforce a Phased Out BAN of LEADED AVGAS.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0001

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

I am a 68 year old conservation and social advocate, writing to you today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0004

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

Please finalize this endangerment finding so that work with the Federal Aviation Administration can begin in earnest and not wait another 7 years. quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0734-0001

Commenter Type: Private Citizen

Commenter: Nastassia Barber

Organization:

Excerpt Text:

As an environmental scientist, I urge you to end lead gasoline in aircraft.

Comment Number: EPA-HQ-OAR-2022_0389-0734-0002

Commenter Type: Private Citizen

Commenter: Nastassia Barber

Organization:

Excerpt Text:

This is not new science, the hazards of lead are well-known. Banning avgas cannot wait, just as banning leaded gasoline in most cars happened decades ago.

Comment Number: EPA-HQ-OAR-2022_0389-0735-0001

Commenter Type: Private Citizen

Commenter: Michael McTernan

Organization:

Excerpt Text:

I live in Hillsboro, Oregon, two blocks away from an elementary school and less than one mile from the runway of HIO airport. This airport is the leading lead polluter in my state, dumping hundreds of tons of lead into our environment every year. This pollution, this poison, is something that will be with us forever, harming myself and my children, and their children. To allow airports to continue to pollute in this way is criminal. There are other options, and while they may cost more or be harder to implement, why should the entire county, and the United States in general pay the price, rather than the minuscule percentage of people who can afford to own their own planes? Allowing this cost to be passed on to the American people, especially the children who are disproportionately harmed by lead pollution, is cowardly and immoral. I urge you to make the easy and right decision here and ban leaded AV gas. The endangerment finding should be finalized and lead AV gas should be banned by the FAA immediately, not two years or ten years from now. Any lead that is dumped between now and the ban will remain a blight on our land and our legacy for generations to come. Please think of how you would feel if every time a plane flew over your house, dozens of times per day, all you could think about was how this would affect your children's development. Will it poison them? Can they play in the dirt outside? Did I make the wrong choice moving here? You could ease the minds of millions and save a generation from negative health effects with your decision. Please make the right and just choice. Below is the boilerplate, which I'm sure you've read a million times but I thought worth reproducing as the numbers speak for themselves.

Comment Number: EPA-HQ-OAR-2022_0389-0739-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Danny Johnson

Organization:

Excerpt Text:

I'm an active pilot of a 1959 Comanche 250 based at KMEB-Laurinburg/Maxton, NC. I'm not a scientist and do not fully understand what impact operating on leaded fuel has on the environment. However I do not support any action that limits the current freedom's enjoyed by a private pilot in the US. I 100% support rapid adoption and distribution of the new unleaded fuel, UL100, that has been approved as a replacement for 100LL. My request is for the EPA to help facilitate distribution of UL100 vs. creating rules or laws that restrict my rights as a US citizen and private pilot, while operating under the rules established by the FAA and NTSB.

Comment Number: EPA-HQ-OAR-2022_0389-0744-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Say NO to East Hampton Airport, Inc.

Excerpt Text:

I am writing to support an immediate ban on the sale and use of leaded fuel in all piston aircraft. Leaded fuel use in aviation has been an on-going problem with low-altitude flights over my area and many other communities for decades. The toxicity of lead is well known, has been since the removal of lead from auto gasoline beginning in the 1970's. It is nothing but egregious abuse that the law permits continued use of leaded fuel in the USA -- to the detriment of all life and to the future of the very planet we call home. We know that no level of lead is safe. We know lead accumulates and persists in the air. We know that 70% of lead in the air today is caused by emissions from piston aircraft fueled by avgas. The many health issues caused by lead have been well researched and documented. The FAA has dragged its feet for far too long on this issue, and every day more lead is being spewed into the air by non-essential flights, many of those flights simply joyrides, going around in circles, over the same area. Pilots and aircraft owners are well aware of the toxic emissions they are widely dispersing over our communities and should be held accountable. Many small aircraft can use already available unleaded fuel, such as that sold by SWIFT Fuels--right now. They choose not to. Other aircraft types can have engines retrofitted to use that same unleaded fuel. They choose not to. All life is impacted. Daily. No more time should be devoted to studies. Ban the use and sale of leaded fuel until unleaded fuel is introduced.

Comment Number: EPA-HQ-OAR-2022_0389-0745-0001

Commenter Type: Private Citizen

Commenter: K Zolvik

Organization:

Excerpt Text:

Um, what century is this? I was shocked to learn aviation fuel still contains lead. Didn't we already do this in the 1970s into the '80s? How did aviation fuel not make the cut? In the EPA's own press release dated 11/28/73: "According to EPA, a significant portion of the urban population, particularly children, are over-exposed to lead through a combination of sources including food, water, air, leaded paint, and dust. Although leaded paint is a primary source of exposure for poisoning in children, leaded gasoline is also a significant source of exposure which can be readily controlled. The total amount of lead used in gasoline amounts to well over 200,000 tons a year." I think we know where most airports are in this country. And we also know lead is toxic, doesn't degrade, has no safe level, causes brain damage, slows development and growth in children, causes cardiovascular harm, ... the list goes on. This stuff is poison. And all these decades people have been living next to, under and around airports absorbing this toxin, breathing it, digging in it, gardening with it... eating it. And now you're asking the public for comment on what? What the EPA should do anyway? Should have done decades ago? Good lord, get the lead out!

Comment Number: EPA-HQ-OAR-2022_0389-0746-0001

Commenter Type: Private Citizen

Commenter: Mike McTernan

Organization:

Excerpt Text:

I agree with this ban. I live in Hillsboro, Oregon, near an airport that is the leading lead polluter in the state. I have two children who are directly affected by the decision to allow private aircraft to distribute lead over the land they play and live in. I live near a school which has planes flying over it all day, spreading lead filled emissions as they go. Allowing lead to be used in AV gas is criminal. There are options, granted they are more costly and difficult to obtain, but why should most Americans be forced to saddle the health and environmental costs of a minuscule few who have the privilege and economic ability to own and maintain their own aircraft? Please have the courage to ban this clearly harmful fuel from our country.

Comment Number: EPA-HQ-OAR-2022_0389-0748-0001

Commenter Type: Private Citizen

Commenter: Emmanuel Ambrocio

Organization:

Excerpt Text:

Docket: EPA-HQ-OAR-2022-0389 I urge the EPA to protect our communities and regulate leaded airplane fuel. Learning about the 10 year study is shocking. I thought having a space for student pilots to learn was a good thing, now I realize it's harmful for our children who are the future. Something needs to change.

Comment Number: EPA-HQ-OAR-2022_0389-0752-0001

Commenter Type: Private Citizen

Commenter: Susan Stinson

Organization:

Excerpt Text:

I live very near a small airport in Northampton, MA. I would very much like the EPA to regulate leaded fuel. I've had asthma all my life, so this is not an abstract issue for me. Thank you so much for taking action on this issue.

Comment Number: EPA-HQ-OAR-2022_0389-0757-0001

Commenter Type: Private Citizen

Commenter: Brandon Bowersox-Johnson

Organization:

Excerpt Text:

I want my son and his generation to grow up with clean air and water. BUT in my state, 8 of the top 10 lead pollution sources are airports. Leaded avgas has a drop-in replacement, and the EPA needs to push even harder to accelerate the switch to unleaded aviation fuels. Do it for my son and all our children everywhere. Please finalize the endangerment finding for leaded aviation gasoline and accelerate your

time-table to adopt rules eliminating the use of leaded aviation gasoline, or "avgas". It's the largest source of lead emissions in the country! No level of lead is safe for children and humans.

Comment Number: EPA-HQ-OAR-2022_0389-0757-0002

Commenter Type: Private Citizen

Commenter: Brandon Bowersox-Johnson

Organization:

Excerpt Text:

Here in Washington State, my nearest GA (general aviation) airport, KCIA, is dangerously close to our BIPOC communities. More than half our county's BIPOC residents live within 10 miles of the airport. Our state-sponsored research showed they face 5 years shorter life expectancy than our county average! The lead pollution is one clear contributor and it has a simple replacement!! Banning avgas cannot wait any longer. Every day that leaded gasoline is used in piston-engine aircraft, communities here in my state and across the country are breathing in lead.

Comment Number: EPA-HQ-OAR-2022_0389-0758-0001

Commenter Type: Private Citizen

Commenter: Peggy Printz

Organization:

Excerpt Text:

Please eliminate the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0760-0001

Commenter Type: Private Citizen

Commenter: Marilyn Miller

Organization:

Excerpt Text:

I just learned about this so i am writing to urge you to finalize an endangerment finding for leaded aviation gasoline that is still being used in airplanes today, and to quickly implore you to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0760-0002

Commenter Type: Private Citizen

Commenter: Marilyn Miller

Organization:

Excerpt Text:

Banning of avgas cannot wait.

Comment Number: EPA-HQ-OAR-2022_0389-0761-0001

Commenter Type: Private Citizen

Commenter: Anne Cassebaum
Organization:

Excerpt Text:

Please make final an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I do not have to explain to you the toxicity of lead.

Comment Number: EPA-HQ-OAR-2022_0389-0763-0001
Commenter Type: Private Citizen
Commenter: Linda Schneider
Organization:

Excerpt Text:

As discussed below, it is high time to get the lead out of gasoline used for airplanes! We took the lead out of most cars, so why do we continue to tolerate it in planes? The dangers of lead to children are well-documented. We need to protect the next generation, as they are our future!

Comment Number: EPA-HQ-OAR-2022_0389-0768-0001
Commenter Type: Private Citizen
Commenter: Edward L. Simpson
Organization:

Excerpt Text:

Dear Administrator Michael Regan, Now is the time to finalize an endangerment finding for leaded aviation gasoline. We must also adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. People live near airports! Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the highest lead emissions are in communities of color. The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Edward L. Simpson South Pasadena, CA 91030

Comment Number: EPA-HQ-OAR-2022_0389-0769-0001
Commenter Type: Private Citizen
Commenter: Lori Shepler
Organization:

Excerpt Text:

Many in the general aviation industry keep bringing up the safety issue to me if leaded fuel is banned now. I wanted to get the facts, so I asked the experts with GAMI. Here's what they told me. Their fuel has been extensively vetted by multiple independent sources and no safety issues have been observed. The octane performance of GAMI adequately meets or exceeds that of 100LL at normal cruise mixtures and GREATLY exceeds 100LL performance at full power and take off. All piston engine aircraft using leaded fuel can operate at full rated power on GAMI fuel and there is no portion of aircraft that will still need to use a leaded fuel. The FAA and AOPA should be focused on the production and distribution of this unleaded fuel so that all these airports get it within a year or less. The FAA's date of banning these lead emissions in 2030 is unacceptable.

Comment Number: EPA-HQ-OAR-2022_0389-0769-0002

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

Since there truly is no safety issue for pilots and planes to use these new unleaded fuels, it is shameful that the FAA and AOPA are trying to bully and stop officials like those in Santa Clara who did the right thing and banned this leaded fuel to protect the health and well being of residents and children near those two airports. The excuse that banning leaded fuel poses a safety risk does not hold water anymore. Banning this fuel now IS the right, smart, and safe thing to do and the number one mission for all the stakeholders in this issue should simply be to advocate and work for the production and orderly distribution of these unleaded fuels. The only known safety risk that has been proven for years is to all the innocent and vulnerable children who are being exposed these lead emissions and poisoned by them. History will always remember these people and organizations who literally tried to keep this unleaded fuel in the air and this health risk to children as long as they could, despite the fact that the unleaded fuels are available and pose no risk to pilots or planes. This is America. Children and adults who live and go to school near these airports deserve to breath air that doesn't have lead in it. I invite those who want to further delay bringing unleaded fuel to airports to come to my children's school and stand in front of it and watch how these low flying planes are dusting children with lead every 3 min or so.

Comment Number: EPA-HQ-OAR-2022_0389-0770-0001

Commenter Type: Private Citizen

Commenter: Donna Patrick

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize your EPA report on endangerment of leaded aviation fuel and adopt rules to eliminate this pollutant. Owners of small planes need to be responsible. It is wrong for this part of our world to be so far behind. It is time to work with the Federal Aviation Administration to quickly ban leaded avgas. Thank you, Donna Patrick 8541 Valley Green Drive SE Olympia, WA 98513 Sincerely, Donna Patrick Olympia, WA 98513

Comment Number: EPA-HQ-OAR-2022-0389-0136-0001

Commenter Type: Private Citizen

Commenter: Celia Taghdiri

Organization:

Excerpt Text:

Please rid Palomar of leaded aviation fuel - this is a public health matter. Thank you for your attention.

Comment Number: EPA-HQ-OAR-2022-0389-0139-0001

Commenter Type: Private Citizen

Commenter: Jacob Kasza

Organization:

Excerpt Text:

Please prohibit the use of lead in aircraft fuel. I live underneath the flight path of a local airport and I am directly impacted by air emissions from small piston aircraft. I am very concerned that the lead in the fuel poses a direct threat to my health and the health of my family.

Comment Number: EPA-HQ-OAR-2022-0389-0140-0002

Commenter Type: Private Citizen

Commenter: Bernita Fruhling

Organization:

Excerpt Text:

Lead was banned from auto gas more than 25 years ago, and lead in piston-engine aircraft fuel should also be banned immediately. Safe, unleaded aviation gas alternatives currently exist.

Comment Number: EPA-HQ-OAR-2022-0389-0148-0001

Commenter Type: Private Citizen

Commenter: Tom Materna

Organization:

Excerpt Text:

Finally, the EPA is taking action to get the lead out and stop hurting children and communities. Please finalize this Endangerment finding and BAN leaded Aviation gas. now there are safe alternatives i.e.; swift 94UL and GAMI U100 octane that the FAA approved as a drop in fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0151-0003

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

Note addressed with respect to the members of EPA, I ask you to please help us with the request that the Hillview airport be regulated immediately so that it is totally prohibited, that Reid Hillview airport stop using gasoline -containing lead, Please do us justice and assert the civil rights that correspond to the children and youth of our community, stop polluting our air and that our children and youth their brains can develop normally like any child, youth of the United States since lead has been discovered dangerously harmful especially in developing children affecting their brain in academic learning and damage to vital organs, so that they can grow up happily in their community, our family is very concerned since we have a child under 11 years old and on a daily basis we also worry about him and the rest of the children and young people who are thousands living near Hillview airport withing 1 ½ mile distance, airplanes constantly flying in our area with horrendous noises every day We are panicking about the danger that they fall into our homes and we are dangerously injured, since the pilots are students and not professional pilots and that factor makes them more dangerous for our community, for the pilots, flying in our community is a luxury and for us it is a necessity to live with dignity, the abuse of our children and young people is enough and the constant abuse toward our community must stop immediately , we ask for immediate justice and that the Reid Hillview airport in San Jose be closed immediately, we urgently ask you to listen to us since our children and young people deserve they be helped, because we are human just like you are.

Comment Number: EPA-HQ-OAR-2022-0389-0153-0003

Commenter Type: Private Citizen

Commenter: Kimberly Turner

Organization:

Excerpt Text:

Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It's high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air.

Comment Number: EPA-HQ-OAR-2022-0389-0157-0004

Commenter Type: Private Citizen

Commenter: Richard Breyer

Organization:

Excerpt Text:

I know there are other fuels to replace the current use of leaded fuels and would like to see leaded gasoline that is currently being use be discontinued now.

Comment Number: EPA-HQ-OAR-2022-0389-0160-0001

Commenter Type: Private Citizen

Commenter: Olivia Zmarzly

Organization:

Excerpt Text:

I would like to raise concerns surrounding the issue of lead emissions from aircrafts operating on leaded gasoline. Considering the fact that lead has been banned from automotive gasoline for over twenty years now, there's no valid reason as to why it should still be in use for aircraft engines. Alternative unleaded fuel options exist, and should be taken advantage of. Any amount of lead exposure in humans is incredibly dangerous, particularly in children as their brains are still developing. There would be a great benefit in a lead endangerment finding for leaded aviation gasoline, as it would protect our public welfare and make the switch from leaded to unleaded happen in a shorter time frame.

Comment Number: EPA-HQ-OAR-2022-0389-0162-0001

Commenter Type: Private Citizen

Commenter: Jean Public

Organization:

Excerpt Text:

stop allowing use of leaded fuel

Comment Number: EPA-HQ-OAR-2022-0389-0165-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: STOP Jet Noise NOW! SFOAK North S.F. Bay Area

Excerpt Text:

Thank you for finally reopening the issue of declaring an urgent need to ban lead additives from AvGas used by general aviation piston combustion engines.

There is no need to restate the statistics, because your agency and the FAA and others have all been well aware of the stats for decades. Initially, the justification for not banning leaded AvGas was that there was no suitable alternative fuel. That was true, and unfortunately, the FAA did more to keep that true, than they did to solve the problem. At some point enterprising Americans decided to research ways to create new unleaded fuels that would meet all FAA and engine manufacturer's safety requirements. That research cost many millions, and the money did not come from the FAA to my knowledge. After many years of testing, a Low Leaded fuel was discovered, and the FAA was very slow to approve it. That Low Leaded AvGas was still not adequate for use in all aircraft engines requiring high octane, but engineers were working on changing that. A few years ago, the problem was finally solved.

GAMI solved the lead problem, but they couldn't solve the FAA Certification problem, so their products sat un-used for years while the FAA subjected them to one stalling tactic test after another. Eventually they passed all of the tests, and early this year (2022) the FAA's top fuel expert engineer approved the new unleaded fuel for use in all general aviation aircraft without limitation. Unfortunately, his boss in Washington D.C. refused to sign the Certificates. Then Congressman Ro Khanna held a hearing on this subject, and neither the EPA staff nor the FAA staff attended. The testimony given by one of the principals of Swift Fuels and one of the owners of GAMI indicated that Swift Fuels was close to achieving an unleaded fuel that could replace their currently marketed low lead fuels. And the GAMI rep stated they have the 100% unleaded right now, and can begin production as soon as the FAA issues their Certifications. The GAMI rep noted they have a contract agreement in place with Exxon to produce the fuel.

When asked about the time to scale up production, and build out the supply chain I think he suggested it could take 12 to 18 months before all airports would be able to be fully serviced, but whatever that estimate was, it could also very likely be speeded up by the EPA making a finding for the elimination of leaded AvGas immediately allowing for the gradual availability of the new fuels. If that happens, and if the EPA can convince the FAA to cooperate in achieving this goal to "Get The Lead Out!", then the FAA has the money to finance any airport infrastructure expenses that may be associated with this process, such as testing old tanks, removing old tanks, replacing tanks to best practices standards.

Comment Number: EPA-HQ-OAR-2022-0389-0188-0001

Commenter Type: Private Citizen

Commenter: Blaine Ackley

Organization:

Excerpt Text:

-Lead was banned from most motor vehicles 25 years ago, because of how toxic lead is to human health. It's high time EPA does the same for aviation gasoline, which now accounts for 70 percent of lead emissions into the air.

Comment Number: EPA-HQ-OAR-2022-0389-0188-0003

Commenter Type: Private Citizen

Commenter: Blaine Ackley

Organization:

Excerpt Text:

-Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded aviation gasoline now.

Comment Number: EPA-HQ-OAR-2022-0389-0191-0002

Commenter Type: Private Citizen

Commenter: John Renehan

Organization:

Excerpt Text:

Hello, the instructions for submitting a comment on the erulemaking portal do not work, so I have to send an email.

I support regulatory action to eliminate the use of leaded fuels in small planes, in particular commercial operators flying in populated areas such as Lake Union and Lake Washington in Seattle.

Comment Number: EPA-HQ-OAR-2022-0389-0192-0001

Commenter Type: Private Citizen

Commenter: Betsy True

Organization:

Excerpt Text:

I strongly support the US EPA Proposed Lead Endangerment Finding for Leaded Aviation Gas. The FAA needs to ban lead in aviation gas to protect children and public health. Exposure to lead, especially breathable airborne lead that is nearly 100% absorbed, is particularly dangerous. This is something that should have been done many years ago. It is time to do something about it.

Comment Number: EPA-HQ-OAR-2022-0389-0193-0002

Commenter Type: Private Citizen

Commenter: Janell Cannon

Organization:

Excerpt Text:

Please do move ahead on removal of lead from aviation fuel. It has been long established that leaded fuel distributes lead into the air, soil and water, and inevitably into all flora and fauna—including humans.

Comment Number: EPA-HQ-OAR-2022-0389-0193-0003

Commenter Type: Private Citizen

Commenter: Janell Cannon

Organization:

Excerpt Text:

Leaded gas has been eliminated [Bold, italicized: for years] in automotive fuels in the U.S., with notable success in reducing ongoing environmental lead pollution, and overall lowered blood levels of lead in humans.

Comment Number: EPA-HQ-OAR-2022-0389-0193-0004

Commenter Type: Private Citizen

Commenter: Janell Cannon

Organization:

Excerpt Text:

Just last year, [Bold, Italicized: global] use of unleaded gas has been finally accomplished. In 2021, Algeria tapped out its last stockpile of leaded gas.

My only question is, why is eliminating lead in Avgas in the U.S./world taking so long???

Comment Number: EPA-HQ-OAR-2022-0389-0194-0023

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: So, How Long Will it Take to Actually Do Away With Avgas AKA 100LL Leaded Aviation Fuel With Tetraethyl Lead (TEL)?]

Why Some Planes Still Run On Leaded Gas And Why That Might Finally Come To An End (html) 10-22- 2022 - The Autopian. SEE aviation community comments:

-So, how long to actually do away with it? Legislate it completely away in the US? Anyone want to take any bets on 10 years? 15?

-The way things are going, I expect to see ads funded by a generic-sounding PAC [Political Action Committee] on the [bold, italics: health benefits of lead particles] popping up shortly.

-The EPA is just proposing an endangerment finding. It has to get published in the Federal Register, go through a comment period, then get published as a final finding, then it goes to rule making to determine a phase out date. 10-15 years sounds about right for the whole process. Hopefully GAMI ramps up production faster than that and by the time the final rule making happens, it is a non-issue since everyone switched already. The EPA has been talking about making an endangerment finding for [bold: decades], and has basically just been [bold: waiting] for an alternative fuel [singular] to be available. G100UL isn't at the pumps yet, but [bold: should be soon].

-Curious about the environmental and health impact of G100UL itself. It's pretty hard do worse than lead, but there must be some kind of additive in there to give G100UL the necessary anti- knock properties, and there's no reason to believe that it's some foraged, artisanal, hand- crafted blend of [italics: fairy farts and unicorn tears]. I can't find an MSDS [Material Safety Data Sheet] for it and (surprise surprise) toxicity is not addressed in GAMI's Frequently Asked Questions press release. It's a proprietary blend of something-or-other. What is it?

Comment Number: EPA-HQ-OAR-2022-0389-0194-0026

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: Waiting for the So-called Industry to do the right thing on its own timeline is NOT an option.]

The four pillars of Negative Aviation Impacted Communities: Politics. Money. Lobbyists. Special Interests. It's not rocket science . . .

It's all about the Politics and Following the Money! This specifically refers to the lobbying power of Big Oil Companies, refiners of leaded avgas, along with Special Interest & Industry Lobbyists groups that pump a lot of money into the pockets of political people. Many politicians are recipients of money from combined Big Oil & Lead and General Aviation Lobbyist Organizations, e.g. General Aviation Avgas Coalition (GAAC). Many of those political members are on the Congressional General Aviation Caucus. NOT [bold: one] has spoken out about eliminating 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL).

EPA knows what it must do: End the use of leaded aviation fuels (html) 12-14-2022 | The Seattle Times. Opinion: Nathan Donley is the Center for Biological Diversity (CBD) Environmental Health (EH) Science Director.

-About 3 million children attend schools located within a mile of one of those airports. Assessments of children have found that the closer they lived to an airport, the higher the concentrations of lead in their blood. Those risks include not only inhaling lead directly from the air but from exposure to lead that settles into soils and dust.

-Airborne lead concentrations exceed the EPA's safety standards for humans at distances of more than a half mile downwind of airports frequented by prop planes.

-As has always been the case with efforts to remove lead, there will be pushback from the aviation and fuel industries. Alternatives to leaded gasoline have been available since 2012 for 80% to 83% of the nation's small plane fleet and a new unleaded alternative was just given blanket approval by the Federal Aviation Administration for all piston aircraft.

-The alternatives are there, but producing new fuels to scale and transitioning airports across the country to unleaded alternatives will take excruciatingly long without pressure to move quickly. [Red text: Waiting for the [bold: industry] to do the right thing on its own timeline is NOT an option.]

-New study shows Autogas [Mogas] can power 80% of piston aircraft (html) 07-12-2012 —General Aviation News.

[Bold: Let's Not Continue to Be Fooled by Aviation Related Pariah, Their Fan Clubs & Cheerleaders!]

"Fool me once, shame on you. Fool me twice, shame on me! Continue to Fool me for almost Sixty Years or Six Decades, Shame on Everyone!"

Comment Number: EPA-HQ-OAR-2022-0389-0194-0027

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: Summary: Eliminate Negative Aviation Impacts (NAIs): Finalize Endangerment Finding & Enact Complete Ban of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)]

There is truly a proven need for the small percentage of real airports with real aircraft that actually provide real demonstrable transportation needs, real jobs and real tax revenues, many others are simply self-perpetuating personal hobby, sport, recreational entertainment social venues cleverly protected & mostly hidden by the world's largest groups of Special Interests & Industry Lobbyists amongst overall aviation statistics that enable increased non-essential aircraft, including helicopter take-offs, landings, accidents & crashes, regularly flying aircraft with improperly configured or broken, tampered with or disabled ADS-B coupled with "disturbing the peace" and "public nuisance" revenge fly-bys intended to

bully, harass and intimidate providing Communities utterly ZERO Socially Redeeming Values (SRVs) including unnecessary Negative Aviation Impacts (NAIs):

- Adverse Health, Safety and Welfare impacts
- Environmental impacts of toxic pollution & noise pollution
- Diminished quality of life
- Reduced Community desirability & property valuation
- Wasted taxpayer money

The American Public deserves truth, protection, accountability and justice provided by action, answers and comprehensive information including environmental and public health impacts, rather than continued myopic, self-serving and unquestioned Aviation Industry, Special Interest and Industry Lobbyist Propaganda, influence peddling and artificial delays.

The Scientific and Medical Facts regarding Negative Aviation Impacts (NAIs) are simply NOT debatable:

- NO safe level of lead in a child's blood with adverse irreversible impacts, even small amounts contribute to an elevated risk of IQ loss, ADHD / Autism, juvenile delinquency, impulse control, developmental delay, learning and behavior problems, increased violence, etc.
- Newborns exposed to lead can experience premature birth, low birthweight, slowed growth, etc.
- Adults exposed to lead are at greater risk of cancer, coronary heart disease, premature death, high blood pressure, strokes, kidney disease, reduced fertility, reproductive problems, childbirth birthing delivery problems miscarriages, etc.
- Aviation noise can interfere with reading comprehension, cognitive functioning, sleep disturbances and many other related health problems, etc.

It's time to stop living in the past as a crutch to protect current investments in outdated toxic, dangerous aircraft & practices once and for all. Seems like true "Multiple Conflicts of Interest" from the "Gate Keepers" on many levels across the Aviation Industry, Special Interests & Industry Lobbyists.

Piston-Engine Aircraft (PEA) including Piston-Engine Helicopters, collectively AKA Flying Junk Piles (FJPs), have an [bold: average age of 50 years old]! Taxpayers don't care about personal 1930s & 1940s Piper Cubs, 1950s Aeroncas, 1960s Mooneys, 1970s Cessnas or Pipers, 1980s Beechcraft Bonanzas, home garage (clown) built Experimental Amateur Built (E-AB), WWI or WWII Bombers, Bell 47s, Robinson R22s or Sikorsky H34s, museum pieces, collectors' items or other flying toys for the wealthy, and certainly NOT for any FJPs that cannot utilize existing Unleaded Fuels.

50 year old Flying Junk Piles (FJPs) have [bold: absolutely nothing] to do with the [bold: future of anything]!!!!

Time to [bold: RETIRE] 1/3 of the so-called General Aviation (GA) "Fleet" of personal hobby, sport, recreational entertainment social Flying Junk Piles (FJPs) that cannot utilize existing Unleaded Fuels and remove Associated "Government Handouts, Entitlements and Grant Assurance Obligations" from associated personal hobby, sport, recreational entertainment social venues / airstrips / facilities / infrastructure.

These are [bold: NOT] taxpayer problems and should [bold: NOT] utilize [bold: ANY] taxpayer money at all. Certainly, no more support than Hunting, Fishing, Boating, Golf, Bowling, National Parks & Camp Grounds or other personal hobby sport recreational social entertainment venues or pursuits receive.

[Bold: Taxpayers Saddled with Thousands of Unnecessary Non-Essential Hobby, Sport, Recreational Entertainment Social Venues That Are NOT Taxpayer Problems That Are Sources of Negative Aviation Impacts (NAIs) Shamelessly Bloating the United States (US) Tax Burden with ZERO ROI]

[Image of United States showing general aviation airports in the US national airport system]

General Aviation (GA) airports & airstrips in the Tragically Out-of-Date, Out-of-Touch United States (US) National Plan of Integrated Airport Systems (NPIAS). Small public airports & airstrips with few or no scheduled passenger flights. NOTE: FAA classified 2,903 airports, 10 heliports, and 39 seaplane bases largely serving General Aviation (GA) eligible for federal support AKA “Aviation Welfare” via Airports Capital Improvement Plan (ACIP) AKA “Government Handouts”. More than 13,100 airports & airstrips, many little more than tiny parcels of mostly private properties with a clear grass area, serve piston- engine aircraft (PEA) including piston-engine helicopters (PEH) nationwide. Clearly the Root & Source of Negative Aviation Impact (NAIs) Protected Fiefdoms across the United States are [bold: NOT] Taxpayer problems at all!

Executive Summary, Conclusion & Taxpayer Demands

Millions of Taxpayers deserve Accountability, Justice and Protection from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Involuntary Poisoning” violating individual “Bodily Integrity” rights protected by the United States Constitution including vulnerable populations such as pregnant moms, babies, school children & elderly and DEMAND:

- Immediate Full Endangerment Finding for Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)
- Immediate Ban on Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)
- Immediate Distribution of Multiple Existing Unleaded Aviation Fuel’s including Mogas per National Aeronautics and Space Administration (NASA) Regional Air Mobility (RAM) Blueprint with Back to Basics "Targeted Investments" at an enormous number of readily available Local Municipal, County, State or Federally owned Commercial Grade Federal Aviation Administration (FAA) Towered facilities Across Entire United States
- Remedy & Right-size ridiculous ancient phony Federal Aviation Administration (FAA) justifications / ROI calculations, Budgeting and Bloated “Government Handouts” AKA “Aviation Welfare” AKA Airports Capital Improvement Plan (ACIP)
- Terminate & Right-size outrageous Subjective Monopolistic Protectionist Arbitrary Federal Aviation Administration (FAA) manufactured Bureaucratic Grant Assurance Obligations, harmful Protections & Red Tape
- Remove & Right-size ANY Federal Support and or subsidies and or “Government Handouts” AKA “Aviation Welfare” for non-essential & un-needed Personal Hobby Sport Recreational Social Entertainment Venues & Privately Owned Commercial Businesses
- Enact Federal MANDATES with stringent requirements eliminating Loopholes and “Multiple Conflict(s) of Interest” on Federal Aviation Administration (FAA) to expedite the process of eliminating Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Once and for All”
- Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Evaluate, Verify and Validate Medical Implications of Long-Term Exposure to Unleaded Aviation Fuels with Proprietary Unleaded Chemical Compositions (PUCCs)
- Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Implement 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Contamination Abatement, Remediation, Cleanup, Removal, Disposal Best Practices, Protocols & Knowledge Base
- Extricate RAMPANT Special Interest & Industry Lobbyist Pariah Political Agendas, Multiple Conflicts of Interest, Mis-Information, Dis-Information, Propaganda & Influence Peddling
- Enact Federally MANDATED U.S. Government Accountability (GAO) Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Transition Investigation

Comment Number: EPA-HQ-OAR-2022-0389-0194-0004

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

To reasonable people almost six decades of indifference, inaction, acquiescence, artificial delays, excuses, hype, dis / mis information, lobbying, influence peddling, propaganda, bullying, threats, intimidation and outright lies absolutely defy contemporary comprehension illustrating the complete total disregard, and utter lack of any real progress totally devoid of any demonstrable effort to truly “Protect Anyone” from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) anywhere in the United States. Six decades of “Reasonable Anticipation that Public Health and Welfare certainly ARE & HAVE BEEN Endangered”!

Almost 60 Years, Six decades of duping the American Public with Special Interest, Industry Lobbyist gibberish, double-talk and non-sense coupled with protection & impunity provided courtesy of “Burrowed In” Local, County, State & Federal Government Department employees laden with glaring, open, obvious multiple conflicts of interest, including the Civil Air Patrol (CAP) and the Federal Aviation Administration (FAA).

The 2022 / 2023 timeframe seems way past time, long overdue, to exercise fair, appropriate, practical common sense to warrant an Immediate EPA “Endangerment Finding” and “Complete Ban” of Leaded Aviation Gasoline (Avgas) AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene Dibromide (EDB) to protect ALL American citizens from “Involuntary Poisoning” whose “Bodily Integrity” rights are protected by the United States Constitution!

Comment Number: EPA-HQ-OAR-2022-0389-0201-0009

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

For the safety of our communities and the environment, the elimination of lead from aviation fuel used in general aviation spark-ignition engines is greatly needed. CARB urges EPA to both formally acknowledge this endangerment and work with the FAA to develop a strategy to expedite the transition to the use of unleaded avgas as quickly as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0001

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

This letter is in response to the US government’s request for public comment pertaining to the EPA’s proposed endangerment finding issued October 7, 2022 – with the ultimate goal to eliminate toxic lead emissions from the combustion of 100LL (leaded) aviation gasoline and replace it with a new FAA-approved and ASTM/Industry-endorsed 100-octane unleaded aviation gasoline (fuel) which is safe for pilots to operate and has the cleanest possible exhaust emissions to serve the 223,000 aircraft across the US piston fleet.

Comment Number: EPA-HQ-OAR-2022-0389-0208-0001

Commenter Type: State Elected Official

Commenter: Adrian Madaro

Organization: Massachusetts House of Representatives, First Suffolk District

Excerpt Text:

My name is Adrian Madaro, and I serve as the State Representative for the 1st Suffolk District in Massachusetts. I am in the unique position of being the Representative for a sizable environmental justice community long burdened by the effects of Boston Logan International Airport within my district. I write in support of banning leaded fuel from aircraft engine usage. Lead is a highly toxic substance that does not degrade in the environment. Considering our proximity in East Boston to the airport, lead emissions have been absorbed by our environment for decades, affecting the health of our residents. Lead is immensely harmful to the health of children and can cause damage to the brain, and nervous system, and slow growth and development, leading to learning and behavioral challenges. In East Boston, we have aircraft flying above playgrounds and schools and it is imperative that the transition to lead-free aviation fuel happen as quickly as possible to protect our vulnerable population. It is commonly known that no level of lead exposure is safe; therefore, while a transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure. I strongly support the decision to ban leaded fuel from aircraft engines due to the consequences communities like East Boston continue to suffer. I believe this is critical to the protection and advancement of public health and environmental stewardship.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0003

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Banning leaded fuel will stop the brain damage, including loss of optimal IQ, that children who live close to airports are at risk of. We have a choice: Do we continue to allow the use of leaded fuel for aviation hobbyists and student pilots (many of which are from foreign countries including China), or do we start the process with the [*Italics: Endangerment Finding*] to prohibit the use of leaded fuels to protect the neurodevelopment of children? Banning leaded fuel, starting with the [*Italics: Proposed Endangerment Finding*], without further delay must be our priority so that the neurocognitive potential of all children is preserved.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0008

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Presently there are unleaded fuels for a significant percentage of aircraft. [Footnote 12: Unleaded fuels are now available for the majority of aircraft. See <https://www.aopa.org/news-and-media/all-news/2022/september/pilot/unleaded-fuels-swift-fuels>] However, as we have found at our [*Italics: Hillsboro Airport,*] there is reluctance to provide/encourage such fuels. Therefore, it is imperative that the EPA issue an endangerment finding and then ban leaded fuels without delay to protect children. The aviation industry will say that a [*Italics: "phase in"*] period will be necessary...but if granted it will be primarily at the expense of toddlers that live around airports where leaded fuel is used. Should the EPA not ban as soon as possible and until then I ask that the EPA provide an information sheet to each household within 1.5 miles of an airport where aircraft use leaded fuel. The information sheet should explain that they and their children are in a high-risk zone for lead poisoning and the information sheet

should also explain the effects of that poisoning. Also, I would suggest that EPA should ask for a law stipulating that any real estate transactions within 1.5 miles of any airport where leaded fuel is used be required to provide that same information sheet to prospective buyers.

Comment Number: EPA-HQ-OAR-2022-0389-0218-0001

Commenter Type: Private Citizen

Commenter: Corinne Greenman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or 'avgas', the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022-0389-0218-0003

Commenter Type: Private Citizen

Commenter: Corinne Greenman

Organization:

Excerpt Text:

Banning avgas cannot wait. Every day that leaded gasoline is used in piston engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

We have now not only reached but surpassed the "Kehoe Paradigm" of "show me the data" on environmental lead poisoning of these planes. All that is left is the continuous inertia of a Governmental Agency to take definitive action. It is way past the time to do the right thing - to ban the use of all leaded fuel. Please read attached files.

Comment Number: EPA-HQ-OAR-2022-0389-0222-0001

Commenter Type: Private Citizen

Commenter: Dorinne Tye

Organization:

Excerpt Text:

Thank you for the opportunity to comment and show my support of finalizing the endangerment finding for leaded aviation fuels and to expedite adoption of rules for eliminating the use and availability of

leaded aviation gasoline. I stand in agreement with the letters submitted to you by numerous community members, and the endless amount of scientists, medical professionals and leaders who've tirelessly raised awareness, qualified, quantified and measured harmful effects and distribution of aviation lead.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0010

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

EPA must proceed promptly with emissions standards for avgas

EPA cannot stop at the endangerment finding, but must quickly proceed with emissions standards for avgas as well.

Upon making an endangerment finding, the Clean Air Act dictates that the EPA [*Italics: “shall . . .*] issue proposed emission standards.” [Footnote 52: 42 U.S.C. (Section) 7571(a)(2)(A) (emphasis added).] “By employing the verb ‘shall,’ Congress vested a non-discretionary duty in EPA.” [Footnote 53: *Coal. for Responsible Regul.*, 684 F.3d at 126.] Thus, “[i]f EPA makes a finding of endangerment” for avgas, “the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant” from piston-engine aircraft. [Footnote 54: *Massachusetts*, 549 U.S. at 533.]

EPA cannot allow FAA or industry opposition to stand in its way. True, the statute provides that EPA must “consult” with the FAA on aircraft engine emission standards, and that EPA “shall not change” such standards if the change “would significantly increase noise and adversely affect safety.” [Footnote 55: 42 U.S.C. (Section) 7571(a)(2)(B)(i)-(ii).] But consulting with the FAA does not mean deferring wholesale to that agency, particularly where, as here, any safety concerns are readily addressed by the availability of unleaded aviation fuel alternatives.

While many aviation advocates express their support for a shift away from avgas toward unleaded alternatives, they stop short of supporting regulatory efforts that would spur that shift and safeguard human health with the urgency that is needed.[Footnote 56: See, e.g., Public Comment from Nat'l Air Transp. Ass'n (NATA) to EPA (Nov. 7, 2022), https://downloads.regulations.gov/EPA-HQ-OAR-2022-0389-0163/attachment_2.pdf (describing NATA's support for a “lead-free future for U.S. piston-engine aircraft,” but markedly withholding such support for EPA's proposed endangerment finding); Proposed Endangerment Finding Regarding Lead Emissions from Aircraft Operating on Leaded Fuel, EPA 25, 26 (2022) (statement of Jim Coon, Sr. Vice President of Gov't Affairs & Advoc., Aircraft Owners & Pilots Ass'n (AOPA)), <https://www.epa.gov/system/files/documents/2022-11/prop-endanger-finding-lead-emission-aircraft-publ-hear-trans-2022-11-01.pdf> (reiterating general aviation industry's “firm and collective support in removing lead from aviation gasoline” but warning against doing so too quickly); Paul Millner, *Fuel For All: Unleaded Avgas Progress Report*, AOPA (Dec. 21, 2021), <https://www.aopa.org/news-and-media/all-news/2022/february/pilot/alternative-fuels-for-all> (reporting that Shell exited PAFI, an FAA initiative similar to EAGLE, in 2021 and “is awaiting EPA action on lead in avgas to support a business case for further fuel development. In other words, the company requires a mandate or deadline for the phase-out of lead before investing more in the project.”).] Instead, they tout voluntary measures such as FAA's new Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative. That initiative aims to “eliminate the use of leaded aviation fuel by the end of 2030.” [Footnote 57: FAA, *EAGLE Initiative* (Dec. 14, 2022), <https://www.faa.gov/unleaded>.] These advocates' views are misguided, for two reasons.

First, 2030 is far too late. As Congresswoman Rashida Tlaib rightly observed, “our children are already being poisoned now.” [Footnote 58: See, e.g., Toxic Air, supra n.12, at 16 (statement of Rashida Tlaib, Member of the Subcommittee, U.S. House of Representatives).]

Second, while industry advocates have expressed their “hope” that the piston-engine aircraft fleet transition to lead-free fuel sooner than 2030,[Footnote 59: Public Comment from NATA to EPA, supra n.56.] they ignore that many in the industry have been working alongside FAA to obstruct the development of lead-free alternatives [Italics: for decades.]

A recent investigative piece details this sordid history: “[FAA has] been on a quest to develop a replacement fuel on and off for three decades, with little to show for it. Why is it taking so long for the US to replace a toxic fuel dating from World War II? It’s a tale of bureaucratic obstruction, technical obstacles, and oil companies fighting to protect their profit margins.” [Footnote 60: Michael J. Coren, Ledged airplane fuel is poisoning a new generation of American children, Quartz (June 16, 2022), <https://qz.com/2173461/leaded-airplane-fuel-is-poisoning-a-new-generation-of-americans>.] The article details how FAA started a “round of unleaded fuel testing through a program known as PAFI, short for the Piston Aviation Fuels Initiative. The top contenders were run through a gauntlet of trials starting in 2013, without success, followed by another round a few years later.” [Footnote 61: Id.] Through it all, industry players “defend[ed] their control over avgas and its replacement.” [Footnote 62: Id.] One former oil executive admitted to a “disinformation campaign,” in which industry “threw up all these objections . . . but that’s all a smokescreen.” [Footnote 53: Id.]

Those efforts successfully slowed the development of a 100-octane unleaded fuel alternative by General Aviation Modifications Inc. (GAMI). Stymied by the PAFI process and industry opponents, GAMI sought approval for its fuel under a supplemental type certificate instead. But there it continued to face delay and obstruction: the fuel underwent more than 12 years of rigorous safety testing and, even then, FAA headquarters held off on signing the approval for months. [Footnote 64: Id.; GAMI unleaded fuel approved for all general aviation aircraft, Gen. Aviation News (Sept. 3, 2022), <https://generalaviationnews.com/2022/09/03/gami-unleaded-fuel-approved-for-all-general-aviation-aircraft/>.] The FAA and aviation advocates have also resisted local jurisdictions’ attempts to phase out the use of leaded fuel. After Santa Clara County banned the sale of leaded fuel at Reid-Hillview, “the pushback was immediate.” [Footnote 65: Coren, supra n.60.] The FAA launched an investigation and threatened to pull federal funding, putting pressure on the County to delay the ban. [Footnote 66: Id.] AOPA also filed a formal complaint with the goal of “revers[ing]” the County’s ban. [Footnote 67: Eric Blinderman, AOPA Files Complaint to Reverse Dangerous California County Fuel Ban (Oct. 17, 2022), <https://www.aopa.org/news-and-media/all-news/2022/october/17/aopa-files-complaint-to-reverse-dangerous-california-county-fuel-ban>.]

Congressman Khanna convened a hearing last summer in which he called out this obstruction. He noted how, for years, “oil companies and aircraft interest groups” have “worked together to prevent [unleaded] fuel from getting FAA approval and spread disinformation about its qualities. Industry groups appear more concerned about disrupting business than about kids.” [Footnote 68: Toxic Air, supra n.12, at 2 (statement of Ro Khanna, Chairman of the Subcommittee, U.S. House of Representatives).] Congressman Khanna concluded that the FAA must “immediately commit to a faster timeline to reach a lead-free aviation future,” “stop deferring to powerful industry interests,” and “help, rather than obstruct, communities that want to ban leaded fuel.” [Footnote 69: Id.]

Against this backdrop, it is hard not to view FAA’s EAGLE initiative with immense skepticism. With two unleaded fuel alternatives already approved—including one that is usable fleetwide—and a third expected to be deployed in 2023, [Footnote 70: Id. at 15 (statement of Chris D’Acosta, Chief Exec. Officer, Swift Fuels).] the need for continued public funding of the EAGLE initiative is unclear.[Footnote 71: See Public Comment from NATA to EPA, supra n.56 (expressing support for the EAGLE initiative, including “provisions for increased funding in the upcoming FAA Reauthorization” and “infrastructure grants”).]

The existing unleaded fuel alternatives are also proven to be safe. FAA officials told GAMI that its 100-octane unleaded fuel “is the most thoroughly tested and documented [supplemental type certificate] that has ever been done at the Wichita Aircraft Certification Office.” [Footnote 72: GAMI unleaded fuel approved for all general aviation aircraft, *supra* n.64.] And Swift Fuels’ 94-octane unleaded fuel has been in use since 2015. [Footnote 73: *Toxic Air*, *supra* n.12, at 12 (statement of Chris D’Acosta, Chief Exec. Officer, Swift Fuels).]

Indeed, the use of this fuel at Reid-Hillview confirms that it is both safe and an effective replacement for leaded avgas: in the first six months since the ban on sales of leaded fuel took place, fuel vendors sold approximately 90 percent as much unleaded fuel as they sold leaded fuel during the first six months of 2021; total flight operations increased by 4 percent relative to 2021; and there were no reported safety incidents related to unleaded fuel.[Footnote 74: Testimony of Cindy Chavez, Santa Clara County Supervisor, District Two, *supra* n.26.] In fact, the FAA’s website now proclaims that it “has outlined a path that would allow the [Reid-Hillview] airport to have safe lead-free operations”—a marked shift in tune from just a few months ago. [Footnote 75: FAA, *Eagle Initiative*, *supra* n.57.] Consistent with the Clean Air Act’s mandate, then, emissions standards for avgas and a transition to unleaded alternatives would not “adversely affect safety.” [Footnote 76: 42 U.S.C. (Section) 7571(a)(2)(B)(i)-(ii).]

The use of unleaded fuel at Reid-Hillview carries other benefits as well. In addition to averting the release of hundreds of pounds of lead emissions, it lowers pilots’ own lead exposure, reduces aircraft maintenance costs, and has driven down the fuel’s price—making it competitive with the leaded alternative. [Footnote 77: Decl. of Harry Freitas Supp. Santa Clara Cnty. Mot. to Dismiss & Mot. for Summ. J. para. 23, 25-26, 39, *AOPA v. Cnty. of Santa Clara*, FAA Docket No. 16-22-08 (filed Dec. 29, 2022), https://downloads.regulations.gov/FAA-2022-1385-0009/attachment_1.pdf.] But for all this success, Santa Clara County has been unable to wholly eliminate lead emissions from the airport. [Footnote 78: *Id.* para. 41 (stating that aircraft using leaded avgas still use the airport “daily”).] To accomplish a full phase out of leaded avgas at Reid-Hillview—and airports just like it across the country— federal regulation is imperative.

Comment Number: EPA-HQ-OAR-2022-0389-0226-0006

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: General Aviation Modifications, Inc.

Excerpt Text:

As that evolving deployment process unfolds, it would be, in our opinion, reckless and dangerous for the EPA to precipitously “ban” the sale of 100LL before the supply of G100UL avgas is sufficient to fully satisfy the various local and regional markets. As mentioned above, and graphically demonstrated by the photograph above, if the EPA does “otherwise”, then there will almost certainly be further incidents or accidents arising out of those types of imprudent regulatory activities.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0005

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The general aviation industry remains firm in our collective support to remove lead from aviation gasoline and our position that any transition from leaded to unleaded gasoline must be effectuated with safety as the highest priority. The industry and the FAA have been working on this unleaded transition for many years. Congress has allocated more than \$57 million to test and evaluate candidate fuels through the Piston Aviation Fuels Initiative (PAFI) program.

In 2010, the General Aviation Coalition of associations submitted comments on the importance of scientific data being available for EPA to make a determination and propose whether an endangerment finding with respect to lead emissions was reasonable based on what was then available. [Footnote 9: Comments of the General Aviation Avgas Coalition on the Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline, Dkt. No. EPA-HQ-OAR-2007- 0294.] We believe that it is in the public interest to eliminate lead from aviation gasoline. In our 2010 comments, we advised the EPA that “[t]here is no demonstrated unleaded replacement for 100LL avgas that meets the safety and operational requirements of the entire fleet.” [Footnote 10: Id. at 5.] In the intervening years, work toward development of such an unleaded replacement that meets the safety performance needs of the U.S. fleet of piston aircraft and FAA regulatory safety requirements has continued apace. And now, in 2022, potential high- octane unleaded replacement fuels are coming into frame, strongly supported by a collaborative industry/government initiative not only to facilitate development and deployment of a safe and market viable unleaded aviation fuel but also to eliminate lead emissions by December 31, 2030.

In an exhaustive 2021 report to the FAA on options for reducing aviation lead emissions, the National Academies of Sciences, Engineering, and Medicine recommended that the “FAA should continue to collaborate with the [general aviation] industry, aircraft users, airports, and fuel suppliers in the search for and deployment of an acceptable and universally usable unleaded replacement fuel,” urging a “holistic process” to develop and deploy such a fuel. [Footnote 11: Options for Reducing Lead Emissions from Piston-Engine Aircraft, Nat’l Academies of Sciences, Engineering, and Medicine (2021), recs. 6.1-6.2, at <https://doi.org/10.17226/26050/>.] Only through a government-industry effort that would involve the private sector, the FAA, and Congress could the aviation system eliminate lead emissions.

We agree with that conclusion, and accordingly the FAA, the Coalition, and other aviation stakeholders have launched a public-private initiative titled “General Aviation Commitment to Eliminate Aviation Gasoline Lead Emissions,” or “EAGLE,” [Footnote 12: Appendix B provides an overview of the EAGLE initiative framework.] which intends to achieve its firm goal—elimination of lead emissions from general aviation aircraft by the end of 2030, or sooner if possible — through development and deployment of a viable high-octane unleaded replacement aviation gasoline that can be safely operated by the U.S. fleet with minimum impact. EAGLE’s work continues apace, and more information on the initiative is available at www.faa.gov/unleaded.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

EPA must act to ban leaded aviation gasoline as part of a holistic solution to finish the fight against childhood lead poisoning. We strongly recommend EPA finalize the proposed endangerment finding as soon as possible and work with the Federal Aviation Administration (FAA) to phase out lead aviation gasoline. To that end, we also support the language in the recently adopted Fiscal Year 2023 Omnibus, which directs the FAA to prioritize the identification and testing of unleaded replacement fuels that are viable and to move forward expeditiously on a rulemaking triggered by EPA’s endangerment finding.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

The community came one step closer to the goal of closing the airport and protecting the community from toxic lead exposure when Santa Clara County, in response to input from thousands of community members, banned the sale of leaded fuel at county airports starting in January 2022. Instead of a toxic airport, we all hope to repurpose the 180 acres of land for a community-centered vision, including parks, natural open space, and other forms in which public land can best serve and support the surrounding community.

Comment Number: EPA-HQ-OAR-2022-0389-0230-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Lead pollution is also an environmental justice issue. In San Jose, the communities most affected by toxic lead fumes are low-income communities of color who were pushed to live near the airport, including within the airport buffer zone, by racist redlining policies. This is also the case for other communities living near general aviation airports.

Previous policies have successfully eliminated lead from other transportation sources and leaded aviation gasoline is the last source of transportation-related lead pollution. Our coalition urges you to finalize the endangerment finding and enact a policy eliminating leaded aviation fuel as soon as possible. Santa Clara county took a step in the right direction by prohibiting the sale of leaded fuel at general airports; however, other communities do not have this protection. Millions of people are exposed to airborne lead pollution on a daily basis and they need protection now. A policy regulating leaded fuel will alleviate public health and environmental concerns, taking a step in the right direction of change.

Comment Number: EPA-HQ-OAR-2022-0389-0231-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

The EPA and FAA have known this lead poisoning has been going on for decades...the EPA can not delay any longer. Lead is clearly a threat to human health!

The EPA must take action to Get the Lead Out now and immediately stop the sale, use and storage of leaded fuel. This cannot wait any longer.... we ask the EPA and FAA to ground recreational aircraft that use leaded fuel instead of poisoning our kids!

Comment Number: EPA-HQ-OAR-2022-0389-0232-0001

Commenter Type: Advocacy Organization

Commenter:**Organization:** Mass Comment Campaign sponsored by Friends of the Earth. (web)**Excerpt Text:**

It has been more than 25 years since the U.S. EPA required the phase-out of lead in automobile gasoline. Lead is a harmful and toxic chemical that causes a broad range of adverse health effects when absorbed by the body, with children being especially vulnerable. The EPA needs to move forward immediately to finalize the endangerment finding regarding leaded gas for piston-engine aircraft in the United States. As the largest source of airborne lead emissions, it is time you address the critical health issues that this fuel causes to people, communities, and the planet. The EPA must take timely action to protect the hundreds of thousands of children being exposed to airborne lead daily -- increasing the likelihood of detrimental health impacts, including nervous system disorders and learning disabilities. The impact of lead on public health, especially our children's health, has gone on way too long. The EPA must find that lead emissions from general aviation aircraft endangers public health and welfare and initiate a rulemaking to eliminate lead from general aviation as soon as possible. There is no safe level of lead exposure, and it is long past time to address the lead emitted from small aircraft. Thank you.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0002**Commenter Type:** Think Tank**Commenter:****Organization:** National Center for Health Research (NCHR)**Excerpt Text:**

These findings should be finalized as soon as possible to give EPA the authority to set aircraft emission standards for lead under section 231 of the Clean Air Act. While we appreciate FAA's plan to eliminate leaded fuel by 2030, we strongly urge EPA to speed up that timeline: reduce the use of leaded fuel by at least 25% by 2025 and eliminate all leaded fuel by 2028.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0007**Commenter Type:** Think Tank**Commenter:****Organization:** National Center for Health Research (NCHR)**Excerpt Text:**

In conclusion, we support the EPA's efforts to address this public health problem that is harming children and adults, and strongly urge a deadline to ban all leaded fuel by 2028.

Comment Number: EPA-HQ-OAR-2022-0389-0249-0002**Commenter Type:** State Elected Official**Commenter:** Adrian Madaro**Organization:** Commonwealth of Massachusetts House of Representative**Excerpt Text:**

My name is Adrian Madaro, and I serve as the State Representative for the 1st Suffolk District in Massachusetts. I am in the unique position of being the Representative for a sizable environmental justice community long burdened by the effects of Boston Logan International Airport within my district. I write in support of banning leaded fuel from aircraft engine usage. Lead is a highly toxic substance that does not degrade in the environment.

Comment Number: EPA-HQ-OAR-2022-0389-0255-0002

Commenter Type: Private Citizen

Commenter: Kim Gustafson

Organization:

Excerpt Text:

Please ban leaded fuel as a necessary and initial step in guaranteeing our health and wellbeing.

Comment Number: EPA-HQ-OAR-2022-0389-0259-0001

Commenter Type: Private Citizen

Commenter: Viney and Nelson

Organization:

Excerpt Text:

We are requesting that you take action today needed to phase in the use of unleaded aviation fuel, and eliminate the use of leaded aviation fuel at all general aviation airports, by issuing a final endangerment finding in 2023 that leaded aviation gas endangers the health and welfare of the public and especially children.

We are especially concerned about San Diego County's Palomar Airport in, a general aviation airport located in our community in Carlsbad.

Comment Number: EPA-HQ-OAR-2022-0389-0261-0001

Commenter Type: Private Citizen

Commenter: Sheryl Gold

Organization:

Excerpt Text:

I am writing to support the ban on the sale and use of leaded fuel in all piston aircraft.

Leaded fuel use in aircraft has been an on-going and increasing problem with low altitude flights over my home, my community (the Town of East Hampton, NY) and many cities, towns and villages on Long Island. The toxicity of lead is well known, especially as it affects youngsters. The many health issues caused by lead have been well researched and documented. NO LEVEL OF LEAD IS SAFE. And 70% of lead in the air today is caused by emissions from piston aircraft fueled by avgas.

While lead from auto gasoline was removed, beginning in the 1970's, absolutely nothing has been done in the aviation industry. This is unacceptable and irresponsible.

The FAA has failed to address this hazardous condition. And as the years pass, more lead is being spewed into the air by non-essential flights. Aircraft owners and pilots are aware of the toxic emissions they are dispersing over our communities, homes, schools, playgrounds, parks and nature preserves; and should be held accountable. Many small aircraft can use unleaded fuel-- available now-- but they refuse to. Some refuse to retrofit their engines to enable them to use unleaded fuel.

As one who is personally impacted by non stop air traffic spewing leaded fuel over my house and deck, I strongly urge the ban of unleaded fuel NOW. Please stop the harm being perpetrated on our citizens and planet.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

In the United States, the use of leaded gasoline in automobiles was finally banned in 1996. The banning of leaded fuels used in vehicles eventually resulted in a 98% decrease in the total atmospheric lead level (Kessler, 2013). There is no compelling reason why avgas can't follow a similar trajectory by phasing out lead use.

Today, the U.S. is in a promising position to phase out and ban lead in avgas—in fact this is critical and long overdue. There are several viable unleaded avgas alternatives that are both safe and effective and will work in most small single and twin piston aircrafts. For example, General Aviation Modifications, Inc (GAMI)'s G100UI high-octane unleaded fuel was recently approved for use by the FAA for the US's fleet of small piston airplanes (Cabrera, 2022). Alternative, small aircraft engines exist that work safely and effectively with unleaded avgas, such as Continentals 360 Series AvGas Engine, that can be fitted into aircrafts (Continental, n.d.).

Lead in gasoline was recognized as a health hazard and an endangerment to the public health and actions were taken toward phasing out and ultimately banning lead in gasoline used in automobile engines. These same steps can and must be followed to remove lead from avgas in the US. Therefore, the EPA must rule that lead in avgas endangers the public health and welfare in the US. Only then can lead use in avgas be phased out and banned to protect the health and well-being of people in the US especially the most vulnerable, our children and future generations to come.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0018

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

III. EPA Should Quickly Finalize the Proposed Endangerment Finding, and the Biden-Harris Administration Should Finalize a Ban on Leaded Avgas Before the End of President Biden's First Term.

EPA must promptly finalize its endangerment finding and move on to regulating emissions from leaded avgas. The need for swift action flows directly from the overwhelming evidence that lead air pollution endangers the public health and welfare with widespread and serious consequences: Every day that planes continue to operate on leaded avgas is another day that individuals breathe in this polluted air and are put at risk of a wide array of adverse health effects, many of which are believed to be irreversible. These emissions have a disproportionate impact on people of color and individuals living in low-wealth communities, who already bear the brunt of disproportionate exposures to lead pollution. EPA must make good on its stated commitments to environmental justice and achieve the aims of its Lead Strategy by swiftly finalizing its Proposed Endangerment Finding and moving to the next stage of regulating leaded avgas.

Once EPA finalizes its endangerment finding, it must work with FAA to quickly get this source of lead out of the environment. There is broad agreement that leaded avgas must be banned; as a branch of the International Council of Aircraft Owner and Pilots Association recently wrote, "[f]or health reasons and also for economic reasons, Avgas 100LL must indeed disappear." [Footnote 101: The Future of AVGAS 100LL and 100UL, Developments in the EU and the USA, Int'l Council of Aircraft Owner & Pilot Ass'ns Eur.: Monthly Enews (July 2022), <https://www.iaopa.eu/contentServlet/iaopa-europe-eneews-july-2022.>]

The Biden-Harris Administration should finish the work that it started after decades of inaction by prior administrations and finalize emissions and fuel standards for piston- engine aircraft before the end of President Biden’s first term. Such standards should eliminate this unnecessary and dangerous source of lead pollution, and they should do so by the end of 2025, when industry leaders expect to be able to deploy fleetwide drop-in fuels. [Footnote 102: The Biden-Harris Administration should ban the use of leaded avgas well before the current 2030 target date set by the FAA’s Eliminate Aviation Gasoline Lead Emissions (“EAGLE”) program—a transition timeline that has been called “a worst-case scenario.” Mark Baker, AOPA President and CEO, Unleaded Fuel You’ve Got Questions, Midwest Flyer (Sept. 28, 2022), <https://midwestflyer.com/?p=15833> (“While the industry-government partnership is calling for a full transition by 2030, I believe that is a worst-case scenario and I expect this to be achieved before then.”).]

Comment Number: EPA-HQ-OAR-2022-0389-0268-0019

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

The availability of alternative fuels means that a ban on leaded avgas is now possible. An unleaded 94-octane fuel has been on the market and available for years, and this fuel can be used in approximately two-thirds of all piston-engine aircraft. [Footnote 103: Transp. Rsch. Bd., Nat’l Acad. of Scis, Eng’g, & Med., Options for Reducing Lead Emissions from Piston-Engine Aircraft 3, 93 (2021), <https://nap.nationalacademies.org/read/26050/chapter/1>.] The remaining third of aircraft that rely on higher-octane fuel also have an alternative fuel: The FAA recently granted approval to a high-octane unleaded avgas, G100UL, that can be used in all aircraft in the fleet. The manufacturer, General Aviation Modifications, Inc., recently said that it will be able to start delivering the fuel this year and will be able to deliver it fleetwide within three years. A competitor, Swift Fuels, expects to be able to bring its 100-octane unleaded fuel to market in the middle of 2023 and expects it to be price competitive with existing fuels. And as Robert Olislagers from FAA’s EAGLE partnership program recently explained, two additional unleaded fuels are in development. [Footnote 104: See Presentation of Robert Olislager, Accelerating the Transition to Lead-free Skies at 1:52:33–44 (Dec. 15, 2023), in Quiet Communities Presents the “Quest for Quiet” Lunchtime Conference Series, Quiet Communities, <https://quietcommunities.org/lunchtime-conferences/accelerating-the-transition-to-lead-free-skies/> (last visited Jan. 17, 2023) (“We have three other fuels that are in the hopper as well, with . . . the Swift fuel likely having their STC coming up . . . in 2023.”); cf. Baker, supra note 102 (“The FAA also continues its testing and evaluation program known as the Piston Aviation Fuel Initiative (PAFI), and two fuel candidates are going through that process.”).] EPA should ensure that this progress continues and use its regulatory powers to expedite the transition away from leaded avgas that is already happening. Given the rapid development of alternatives to leaded avgas, and in order to fulfill its directive to protect public health and welfare, this Administration must move forward with a ban.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Further, the Biden-Harris Administration must finish the important work that it started and finalize a ban on leaded avgas and the resulting emissions before the end of President Biden’s first term.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-002-0003

Commenter Type: Advocacy Organization

Commenter: Mayra Pelagio

Organization: Latinos United for a New America

Excerpt Text:

In our region, Santa Clara County was responsive to the needs of the communities who have been exposed to lead and we partnered with them to ensure that everyone living under the one point five-mile radius within the airport which is a source of emissions received the information about lead and the health effects it poses. Our community leaders distributed information about the damaging effects of lead and resources to obtain lead testing but even with this information, our families are still left with no tangible resolution to the real problem which is exposure to leaded fuel.

Santa Clara County has banned the sale of leaded fuel in the airports, but pilots are still able to refuel in other sites and as they have shared in multiple media outlets they do refuel with leaded fuel and do continue to operate out of the Reid-Hillview Airport. We cannot continue to wait. There are ten schools located in within these airport and our children are continuing to be exposed to airborne lead pollution every day. I heard earlier that a transition to non-leaded fuel needs to be a just transition but it is not -- but it is not just by any means to communities who continue to suffer through the environmental injustice of being exposed to airborne lead pollution. I know that we are very fortunate to have the support we have from local governments and I am deeply concerned that other communities are being exposed to airborne lead pollution from leaded aviation fuel without any regulations that can help, that can keep them -- help them especially with children who are developing. I urge you to take these comments into consideration when you are conducting your endangerment finding and think of all of the communities that continue to be effected by allowing the use of leaded aviation fuel from small aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-004-0002

Commenter Type: Private Citizen

Commenter: Maricela Lechuga

Organization:

Excerpt Text:

So, I hope that you will consider that, and the use of lead-based fuel immediately, we cannot wait ten years for this to be a slow transition. Think about all the children and the communities in the U.S. that are going to be impacted in the next ten years if you wait that long to phase it out when you know that the majority of these airplanes are not flying for emergency purposes, they are flying for recreation or -- MS. PIGGOTT: 30 seconds. MS. LECHUGA: Or for student pilots who are learning to fly. And this does not justify the harm that it's doing to our communities. So, I hope that -- end the use of lead based fuel immediately.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-006-0004

Commenter Type: Private Citizen

Commenter: Richard Offerman

Organization:

Excerpt Text:

We need to have an endangerment finding finalized so our community can work with our county supervisors to quickly ban the sale of leaded aviation fuel AVGAS at Buchanan.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-007-0003

Commenter Type: Advocacy Organization

Commenter: Elaine Miller

Organization: Plane Sense 4 Long Island

Excerpt Text:

In 1996, the EPA completely banned leaded gasoline for on road vehicles. Now, I don't know if you took into consideration the outcry of the car industry, but obviously you didn't because you banned it in cars. So, I also would like to just reiterate that the FAA is a governmental agency, the FAA is a government agency supported by our tax dollars, the government works for the people, we the people of the wards that represent the cornerstone of every American's right to live a life free from oppression and injustice. We are a nation of laws that aim to protect health, quality of life, security and individual rights. Under these laws we have created agencies that were intended to serve all the people, but in short time, most of these agencies ended up captured in the service of narrow corporate interests. The FAA is a prime example captured in service of the aviation industry while failing the people solely to benefit airline profit margins. We the people refuse to continue to be the airline industry's or the FAA's collateral damage. I'd like to leave you with one quote that I think should remain in your heart and in your minds when you are considering whether you are going to continue our communities to be exposed to leaded fuel and leaded fuel emissions. We must make it an imperative duty to our government to protect the gifts which nature has bestowed on America and to ensure the maintenance of a clean, healthy, wholesome environment for our people.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-008-0002

Commenter Type: Private Citizen

Commenter: Dorinne Tye

Organization:

Excerpt Text:

But it is time to exercise the authority of your Agency and mandate an immediate discontinuation of this neurotoxin air pollutant distributed by some of the highest known heavy metal and pollutant loads outside of mines and wells. I implore the EPA to return to your roots which were not participatory with big oil. Please do not allow one more day of the underestimated cumulative impacts from piston engine lead, largely financed through educated dollars which benefit a very small portion of individuals.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-011-0005

Commenter Type: Local Government

Commenter: Sylvia Gallegos

Organization: Deputy County Executive, County of Santa Clara

Excerpt Text:

The county of Santa Clara emphatically supports the proposed endangerment finding and urges the EPA to act swiftly to ban leaded AVGAS. In so doing the EPA can help create market conditions that will accelerate the adoption of unleaded AVGAS throughout the country. This is -- there is urgency underlying this request, as I mentioned earlier, the county stopped the selling of leaded AVGAS at our airports in January and despite the fact that flight operations have continued unabated and without mishaps, the county recently received a Part 16 complaint from AOPA challenging our action to stop selling leaded AVGAS which may ultimately compel the county to resume the sale of leaded AVGAS.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0007

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

The lack of regulation of AVGAS at the federal level undermines local public agencies' ability to fulfill their core functions to protect the public health, safety and welfare of those exposed communities. Alongside direct harm to constituents, lead exposure imposes societal costs that ripple through social safety nets, burdening health and hospital systems, school systems and special education services and policing and crime control infrastructure and diverting resources from other agency functions yet, despite the pressing concerns for local agencies, they cannot stop exposure from leaded AVGAS alone. Actions that the county has taken in its proprietary authority like eliminating sales of leaded fuels at the airports have significantly reduced exposures but the country cannot stop aircraft using leaded fuel from transiting through its airports nor can it control fuel sales at other airports. Coordinated and bold federal action is needed to solve this problem. We thus urge the EPA to act aggressively in the next phase of the rule making by swiftly proposing and finalizing emission standards that ban lead from AVGAS. This is technologically feasible and can be done quickly without undue cost. The FAA has already certified use of a fully unleaded drop in fuel for entire piston engine fleet. Swift action is further compelled by the Biden/Harris administration and the EPA's own commitment to advancing environmental justice including EPA's new strategy to reduce lead exposures in communities overburden by pollution.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0008

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

And finally rapidly banning rapid AVGAS is ethically necessary.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0010

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

The FAA and EPA must continue to work towards this end goal but we know that communities cannot wait for relief any longer. With the historic GAMI fuel approval, we urge EPA to work with FAA to more quickly phase out the use for leaded aviation fuels. For decades the government has neglected the largest remaining single source of airborne lead emissions. It has already been 16 years since the first petition to EPA to ban leaded aviation gasoline during which children and families continue to be exposed to lead in the air. Another eight years until a ban is potentially put in place is unconscionable. This is an environmental health crisis but one that the EPA can end. EPA has recognized the danger of lead exposure for decades, it's been almost 50 years since EPA started to phase out lead in motor vehicles. We know there is no safe level of lead exposure and we are continuing to learn more about the health effects of exposure to lead even at very low levels of exposure. A ban on lead in aviation fuels is long overdue

and every day that passes without one, children and families are being harmed by the life alternating damages of lead poisoning

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0005

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Banning leaded aviation gasoline is one of the many actions EPA to insure the health and well-being of communities across the country are protected from lead poisoning.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0006

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

These risks are precisely why leaded fuel was phased out and ultimately banned in motor vehicles decades ago. It's time for the use of AVGAS in piston aircraft to follow suit particularly since the vast majority of piston engine aircraft flight time stems from personal and recreational use according to FAA statistics. These uses come at the expense of low income communities and communities of color.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-015-0008

Commenter Type: Advocacy Organization

Commenter: Cecelia Segal

Organization: Natural Resources Defense Council

Excerpt Text:

NRDC stands with the community including the Cassell Neighborhood Association in seeking to eliminate lead exposure from the airport once and for all. EPA's lead strategy declared the Agency's commitment to protect all people from lead with an emphasis on high-risk communities. We urge EPA to adhere to that commitment and finalize the proposed endangerment finding as soon as possible

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-016-0005

Commenter Type: Advocacy Organization

Commenter: Gary Keller

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

Our children and grandchildren continue to be at stake. Thank you for this time.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-018-0001

Commenter Type: Advocacy Organization

Commenter: Cristina Carvajal

Organization: Wisconsin EcoLatinos

Excerpt Text:

I am the founder and Executive Director of Wisconsin EcoLatinos, a non-profit environmental conservation organization. I am here to ask the EPA to remove lead air pollution from small aircraft, a danger to public health and welfare. I live in Middleton, Wisconsin with my family. My youngest child attends Krome Middle School. The City of Middleton recently approved the expansion of the City of Middleton Municipal Airport, also known as the Morey Airport. This expansion will bring significant air traffic to the area mostly small aircraft. We are extremely concerned about the pollution this aircraft will bring to our homes and our schools especially lead pollution. Within two miles of the airport, there are two (26) preschools, three elementary schools, a high school and my son's middle school. The airport is also surrounded by several kids' sports venues, parks and neighborhoods. Some of the reports were about the negative effect of lead pollution on children's health, including learning disabilities and behavioral disorders.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0003

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

This action to propose and finalize a public health endangerment finding is long overdue and if EPA is serious about its commitment to public health and environmental justice, the Agency must act to quickly end the use of leaded aviation gasoline and get us to the solutions.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-019-0004

Commenter Type: Advocacy Organization

Commenter: Karina Gomez

Organization: Center for Environmental Health

Excerpt Text:

We strongly encourage EPA to work with the FAA to issue emission standards that completely phase out, rather than simply limit, lead emissions from the AVGAS. We all know that lead is a potent neurotoxin that can cause irreversible and lifelong health effects and they bare repeating here.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0003

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

I have been involved in the aviation problem issues for some years. We finally stopped one airport expansion and a neighboring private airport, and I am very concerned that the EPA needs to stop the leaded fuels use. There are alternatives. There are plenty of alternatives. Now, I know that there are those who have said they are going to wait until electric airplanes that are available, but the truth of the matter is, there is actually non leaded fuel available and many of these pilot training facilities just don't want to spend the money to upgrade their equipment to use the non leaded fuel. So, I am calling on EPA to stop the leaded fuel use.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0005

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

It's been taken out of transportation in cars very long ago at this point and yet we are still using it in aviation fuel. And there is just no excuse for it, we don't need it and there is no reason why we should be poisoning our entire farming area.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-021-0006

Commenter Type: Private Citizen

Commenter: Ellen Saunders

Organization:

Excerpt Text:

My comment is please take leaded fuel out of aviation pilot training facilities like Hillsborough Airport and other pilot training areas.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-022-0004

Commenter Type: Advocacy Organization

Commenter: Todd Larsen

Organization: Green America

Excerpt Text:

As we heard, leaded aviation fuel now counts for 70 percent of the airborne lead in the U.S. so it's high time that the EPA issue the endangerment finding and then issue rulemaking to phase out leaded aviation fuel. As a nation we were able to phase out leaded gasoline for cars and we did so without impacting the ability of Americans to drive. We can certainly do the same for leaded aviation fuel. Alternatives to leaded fuel actually exist and they work and those will be scaled up and used at airports nationwide if the EPA acts. That's why I encourage the EPA to do so and doing so would be in line with the Biden/Harris administration commitment to supporting low income and communities of color nationwide. Communities of risk shouldn't be asked to wait any longer for the risk from leaded fuel to be addressed. Thank you for your time and attention to these remarks.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-025-0002

Commenter Type: Private Citizen

Commenter: Katherine Riley

Organization:

Excerpt Text:

Lead was declared illegal to include in gasoline for cars over 25 years ago. Why hasn't this be done for airplanes? Why are we exposed to lead daily? Unleaded gas is available. The Port of Portland which oversees the airport, our Hillsborough City Council, our Washington County Commission -- commissioners have all refused to take action. This is why it is so important that action needs to be taken at the federal level. Please make this change to eliminate lead in AVGAS without any further delay.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0001

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

Good afternoon, my name is John Bottorf with cleaneearthforkids.org. We support the comments from Ms. Gallegos, Dr. Lanphear, Oregon Aviation Watch, Gary Keller, Debi Wagner, all who are fighting for our children's future and we thank the country of Santa Clara for their leadership in stopping lead in aviation and we give special thanks to Sandra Stahl, our Get the Lead Out consultant. Cleaneearthforkids.org calls for the immediate stop of the sale and use of leaded fuel. The EPA and FAA have known this lead poisoning has been going on for decades, lead should have been banned then, the EPA cannot delay any longer. Lead is clearly a threat to human health. You must protect public health. You must make this the top priority of the EPA. Lead in aviation fuel is an environmental, racial and social justice issue.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0004

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

People living and working by the airports are unaware that lead is an aviation fuel, and everyone believes the EPA banned lead from all fuels decades ago. They and their children are being poisoned and they don't know, they were never told. You must notify and educate the public on this lead exposure. It is your job to protect them. Stop the lead in our air, our water and our land. You must not delay any longer. You must take immediate action and stop the leaded fuel now. There is no safe level of lead.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-026-0006

Commenter Type: Advocacy Organization

Commenter: John Bottorf

Organization: Clean Earth 4 Kids

Excerpt Text:

The EPA must take action to get the lead out now, you must immediately stop the sale of leaded fuel. This cannot wait any longer. Ground recreational aircraft instead of poisoning our kids.

Comment Number: EPA-HQ-OAR-2022_0389-0678-0002

Commenter Type: Private Citizen

Commenter: Peter Ewert

Organization:

Excerpt Text:

Given the serious health risks posed by lead exposure, it is crucial that the Environmental Protection Agency (EPA) takes action to address this issue at airports. This may include implementing regulations to limit, or eliminate, the use of leaded aviation fuel, as well as implementing measures to minimize

exposure to lead for children living near airports. I urge you to take this matter seriously and to take action to protect the health and well-being of our nation's children.

Comment Number: EPA-HQ-OAR-2022-0389-0130-0001

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

I am writing this note to express my feelings and that of our community, I want to express my feelings and ask all the leaders of the community and also of the county and at the state level, to support us. In my next comment, I feel very sad and disappointed by the area where we live with my family for the last 43 years because the county and hillview airport have failed to notify us that planes have been flying on gasoline containing lead, and because the airport has not installed octagons of at least 4 centimeter reading that warns that they use LEDs and other fuels that can be poisonous to our people, our community, that these warning octagons have not been installed on their facility gates outside on all four sides of their aviation land, and the county from Santa Clara the warning to the community before beginning to live in these areas, since I and my entire family were unaware of this situation of planes flying with fuel with lead and other possible poisonous fuels, I ask all leaders to do us justice, to close hillview airport immediately, and while it is open, to make the airport leaders sign regulations that they will not use gas containing lead and that the airport be continuously regulated and if the airport fails with the regulations they are fined with high monetary fees

Comment Number: EPA-HQ-OAR-2022_0389-0459-0001

Commenter Type: Private Citizen

Commenter: Eleanor Saunders

Organization:

Excerpt Text:

If we aren't yet at the point of replacing conventional avgas with zero emissions fuel, we should at least do something to reduce the other environmental and human damage the current avgas causes.

Comment Number: EPA-HQ-OAR-2022_0389-0618-0001

Commenter Type: Aircraft Owner/Operator

Commenter: John Schreiber

Organization:

Excerpt Text:

I have been a pilot since 1984, have owned many piston engine aircraft, and I am an aircraft mechanic. I am also a US citizen, and I am ashamed by the lack of performance by most administrative entities, including the EPA. IIRC, it took until 1978 to ban lead in paint in this country, though it was known to be harmful prior to WW2. It took until 1996 to ban lead in auto fuel, with Biden arguing for lead. If anyone looks seriously at the record, you will find that the piston engine manufacturers and aircraft sellers have avoided every CAA pollution regulation since the beginning of time. We still have the equivalent of road draft tubes for crankcase ventilation. HC, CO, and NOx are ignored, except in the aircraft cabin by pilots who wish to stay alive. I am willing to ignore the special treatment regarding currently regulated road vehicle exhaust emissions. I mention this to remind other commenters of the special treatment by exemption we aviators receive. Please find leaded fuel to be an endangerment to public health and

welfare. Below are additional comments relating to getting the lead out Mandate that the 100ULL specification become the maximum allowable lead content immediately. Immediately ask Congress to mandate at least one self serve 94UL (<https://www.swiftfuelsavgas.com/faq>) or Hjelmc0 91/96UL (https://www.hjelmco.com/pages.asp?r_id=13395) tank and pump at all high population density GA usage airports, with the fuel to be sold at a price lower than 100LL. This should be in effect until 100UL is readily available. Take the land by eminent domain, if needed, to place the pump and tank. Mandate that the FAA negotiate and pay for the G100UL STC (<https://gami.com/g100ul/g100ul.php>) for every aircraft, if EAGLE does not have a solution by 2025. This would be the penalty for failing to get 100UL fuel done, by (PAFI) in 2012. Mandate that the FAA fast-track and pay for certification of water-methanol anti-detonation system Supplemental Type Certificates, such as: https://www.flyinpulse.com/inpulse_info/how_inpulse_works This product allows the use of 91 octane unleaded fuel in engines certified for 100 octane. Similar systems are available for automobiles for less than \$1000.00. Thank you for your attention in this matter.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0021

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Commitment to Continued Non-Committal TEL-Cartel Implied Commitment Favorite Words & Phrases

More gibberish, double-talk and non-sense, stalling & delays ZERO actions. If any personal doctor or financial advisor repeatedly used these words or phrases over and over and over we'd all know we're in BIG trouble:

- most likely
- eventual removal
- primary tenet
- eventual removal
- ultimately working toward
- already promising steps
- taken in that direction
- more to come in the near future
- will move cautiously and methodically toward
- ultimately
- might take the form
- likely not for a number of years
- to be reportedly used
- will help guide
- continue to be evaluated
- outcomes of these efforts will also be considered
- likely not for a number of years

Unacceptable Misleading Timing, Phases, Milestones, Deliverables

- Overall: multi-year, multi-step regulatory process, end of 2030 or sooner, right?
- First step: EPA's Endangerment Finding. one year, by end of 2023
- Step 2a: EPA's Aircraft Emissions Standards. approximately two years
- Step 2b: FAA's Fuel Standards. approximately two years
- Step 3: FAA's Certification Standards. another multi-year process involving proposed rulemaking,

public comment, and internal government coordination. The publication of a final rule does NOT in and of itself implement an immediate “ban” on the use of leaded avgas.

The Special Interest & Industry Lobbyist gibberish, double-talk and non-sense continues. Waiting for the [bold: industry] to do the right thing with its own expert finely crafted marketing & messaging, phony justifications, bizarre biased myopic statements & decisions, more delayed planning & timelines coupled with demonstrable patterns of health deficits and disease over the last 6 decades, 60 years, surely make any judgements or even any opinions appear to be disingenuous, inappropriate, misguided, completely biased, patently misleading and or mostly false when applied to 99.998% of taxpayer needs is NOT an option.

Hollow words, pledges and vows plus lack of any real action that do NOT present let alone even approach a realistic timeline that meets the urgency of this public health crisis debacle and the grave environmental injustice posed by the continued use of the toxic poisonous Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL).

Literally mountains of technological, scientific and medical based data, facts & evidence representing decades of effort supporting the EPA’s proposed finding, the direct and socialized costs of the EPA’s failure to regulate Tetraethyl Lead (TEL) emissions, the profound health harms of continued Tetraethyl Lead (TEL) exposure coupled with the public health and environmental justice imperatives Mandate SWIFT if not IMMEDIATE Total BAN of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) nationwide. There are literally NO factual or compelling Public Health, Safety or Welfare reasons to the contrary to be found anywhere.

Again, seems to ALL boil down to a single mission with a single priority:

Avgas AKA 100LL with TEL vs Pregnant Moms, Babies, School Children & Elderly?

Comment Number: EPA-HQ-OAR-2022_0389-0679-0001

Commenter Type: Private Citizen

Commenter: James Rausch

Organization:

Excerpt Text:

I concur with comments submitted by the Coalition for Sustainable Aviation (CSA). If a rule regarding aviation fuel is implimented it should be made by the FAA, the agency directly responsible for flying safety. This is an issue very similar to noise abatement in the vicinity of airports, a matter fully under the administrtion of the FAA.

Comment Number: EPA-HQ-OAR-2022_0389-0653-0002

Commenter Type: Private Citizen

Commenter: Kerr Bisch

Organization:

Excerpt Text:

o The solution is simple, move the runup area away from the property boundary. The Solution is Dilution.
o There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. o Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary.

Comment Number: EPA-HQ-OAR-2022_0389-0665-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The solution is simple, move the runup area away from the property boundary. The Solution is Dilution. There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. Mandating a fleet wide new fuel or modifying aircraft engines, for the few isolated instances where communities are in close proximity to airports, is excessive and simply not necessary. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions. By hastily banning certain fuels at airports accidents have already occurred, Reid-Hillview is one such case. <https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf>. The banning of certain fuels at airports will and has resulted in misfuelling of aircraft: <https://download.aopa.org/advocacy/2023/Niknam%20Nickravesh%20Declaration.pdf>.

Comment Number: EPA-HQ-OAR-2022_0389-0688-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Phillip Witt

Organization:

Excerpt Text:

I have been a Private pilot and aircraft owner for over 25 years now, and I am a retired Aerospace Quality engineer. Private and recreational flying has been an American heritage type of freedom not seen in many other countries of the world. Government regulations mandating a new fleet wide fuel, and or the modification of our engines to accept this fuel will be completely cost prohibitive and unnecessary. I have been able to review, and research the comments provided on this docket by the Coalition for Sustainable Aviation (CAS) and I am in total agreement with their proposed, no nonsense, safe solutions. I will encourage the FAA to implement these low cost and effective changes to the small number of airports with communities that are in close proximity. No need for blanket changes to airports nationwide. If it ain't broke, don't fix it.

Comment Number: EPA-HQ-OAR-2022_0389-0722-0001

Commenter Type: Private Citizen

Commenter: Amrita Burdick

Organization:

Excerpt Text:

Please help reduce lead emissions, by regulating aviation fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0737-0004

Commenter Type: Private Citizen

Commenter: Teodora Reyes

Organization:

Excerpt Text:

Supporting the United States Environmental Protection Agency's Proposed Regulation of Leaded

Aviation Gasoline Recommendation as submitted by Supervisor Solis is one step closer in helping LA and impacted communities living next to general aviation airports address the negative impacts of leaded aviation practices. The County Board of Superiors through CA and EPA must act quickly to protect our communities and regulate leaded aviation fuel once and for all.

Comment Number: EPA-HQ-OAR-2022_0389-0739-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Danny Johnson

Organization:

Excerpt Text:

I'm an active pilot of a 1959 Comanche 250 based at KMEB-Laurinburg/Maxton, NC. I'm not a scientist and do not fully understand what impact operating on leaded fuel has on the environment. However I do not support any action that limits the current freedom's enjoyed by a private pilot in the US. I 100% support rapid adoption and distribution of the new unleaded fuel, UL100, that has been approved as a replacement for 100LL. My request is for the EPA to help facilitate distribution of UL100 vs. creating rules or laws that restrict my rights as a US citizen and private pilot, while operating under the rules established by the FAA and NTSB.

Comment Number: EPA-HQ-OAR-2022-0389-0141-0002

Commenter Type: Private Citizen

Commenter: Alan Levenson

Organization:

Excerpt Text:

Please act swiftly and decisively and ban the use of lead in aviation fuel.

This action is way overdue as lead has been banned from autos, paint and toys for decades.

The FAA has stalled and only through action on the part of the EPA, local state and federal government, and the public will aviation do what they should have done many years ago.

Comment Number: EPA-HQ-OAR-2022-0389-0210-0002

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

The City believes that lead in aviation fuel is a nationwide challenge that should be addressed nationwide. After the adoption of the endangerment finding, we encourage the EPA and other federal agencies to develop the regulations and actions necessary to bring unleaded aviation fuel to the market as rapidly as possible. We are encouraged by the EAGLE initiative, a public- private partnership led by the Federal Aviation Administration, to accelerate the actions and investments necessary to permit both new and existing general aviation aircraft to operate lead- free, without compromising aviation safety and the economic and broader public benefits of general aviation. EPA regulation of lead in aviation gas should be coordinated with these larger efforts.

EPA's previous actions to eliminate lead in motor vehicle fuel have significantly improved public health. The City believes that elimination of lead in aviation fuel will build on that progress. Although the

proposed endangerment finding is an important first step, the City supports the EPA to utilize rulemaking to impose an accelerated yet reasonable timeline that incentivizes the mass production and distribution of new 100 octane unleaded avgas so that it can be utilized by all piston aircraft at the Middleton Municipal Airport and all other U.S. airports as soon as possible, while preserving the important role that general aviation plays in communities and the economy throughout the country.

Comment Number: EPA-HQ-OAR-2022-0389-0256-0004

Commenter Type: Private Citizen

Commenter: Kathryn Sharpe

Organization:

Excerpt Text:

The EPA must act swiftly to finalize its endangerment finding, certify unleaded avgas, and work with the Federal Aviation Administration to phase out any further use of leaded gas by piston driven airplanes.

Comment Number: EPA-HQ-OAR-2022-0389-0257-0002

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

The City of Middleton, Wisconsin, joins other sponsors of general aviation airports to express our support for the proposed endangerment finding. We support the EPA's public health focus on the elimination of lead in aviation fuel and encourage the EPA to adopt the proposed endangerment finding and proceed to rulemaking.

The City of Middleton is a nationally recognized leader in environmental sustainability, and has plans and policies in place to preserve, protect, and enhance our community-wide stewardship ethic. The City has long embraced measures to reduce pollutants emanating from a wide variety of sources, and the use of the existing 100LL (low-lead) fuel by the aviation industry, including at the Middleton Municipal Airport, is no exception.

Middleton Municipal Airport—Morey Field, like so many other airports, plays an important role in the Madison Metro Area and the local economy. Nearly 100 piston aircraft are based at the Middleton Municipal Airport which is used by pilots for a wide variety of purposes. Only a half dozen or so airports in Wisconsin have more based aircraft.

The City believes that lead in aviation fuel is a nationwide challenge that should be addressed nationwide. After the adoption of the endangerment finding, we encourage the EPA and other federal agencies to develop the regulations and actions necessary to bring unleaded aviation fuel to the market as rapidly as possible. We are encouraged by the EAGLE initiative, a public-private partnership led by the Federal Aviation Administration, to accelerate the actions and investments necessary to permit both new and existing general aviation aircraft to operate lead-free, without compromising aviation safety and the economic and broader public benefits of general aviation. EPA regulation of lead in aviation gas should be coordinated with these larger efforts.

Comment Number: EPA-HQ-OAR-2022-0389-0257-0004

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

Although the proposed endangerment finding is an important first step, the City supports the EPA to utilize rulemaking to impose an accelerated yet reasonable timeline that incentivizes the mass production and distribution of new 100 octane unleaded avgas so that it can be utilized by all piston aircraft at the Middleton Municipal Airport and all other U.S. airports as soon as possible, while preserving the important role that general aviation plays in communities and the economy throughout the country.

Comment Number: EPA-HQ-OAR-2022-0389-0261-0001

Commenter Type: Private Citizen

Commenter: Sheryl Gold

Organization:

Excerpt Text:

I am writing to support the ban on the sale and use of leaded fuel in all piston aircraft.

Leaded fuel use in aircraft has been an on-going and increasing problem with low altitude flights over my home, my community (the Town of East Hampton, NY) and many cities, towns and villages on Long Island. The toxicity of lead is well known, especially as it affects youngsters. The many health issues caused by lead have been well researched and documented. NO LEVEL OF LEAD IS SAFE. And 70% of lead in the air today is caused by emissions from piston aircraft fueled by avgas.

While lead from auto gasoline was removed, beginning in the 1970's, absolutely nothing has been done in the aviation industry. This is unacceptable and irresponsible.

The FAA has failed to address this hazardous condition. And as the years pass, more lead is being spewed into the air by non-essential flights. Aircraft owners and pilots are aware of the toxic emissions they are dispersing over our communities, homes, schools, playgrounds, parks and nature preserves; and should be held accountable. Many small aircraft can use unleaded fuel-- available now-- but they refuse to. Some refuse to retrofit their engines to enable them to use unleaded fuel.

As one who is personally impacted by non stop air traffic spewing leaded fuel over my house and deck, I strongly urge the ban of unleaded fuel NOW. Please stop the harm being perpetrated on our citizens and planet.

Comment Number: EPA-HQ-OAR-2022-0389-0771-0003

Commenter Type: Trade Association

Commenter:

Organization: National Agricultural Aviation Association (NAAA)

Excerpt Text:

Currently, leaded aviation fuel is needed for the aerial application industry's high compression engines without being subject to mechanical problems including engine failure from untested alternatives. An engine failure in an aerial application aircraft potentially could cause pilot injury or death. A crash could also result in an environmental spill. Removal of leaded aviation fuel from the market before an alternative is readily available would cause a reduction in the ability to provide agriculture and other sectors with the most efficient application method and thus production.

NAAA urges the EPA to work with the FAA and industry to ensure the nationwide availability of a suitable fuel before removing leaded aviation fuel from use.

Comment Number: EPA-HQ-OAR-2022_0389-0617-0001

Commenter Type: Private Citizen

Commenter: Lex Nino

Organization:

Excerpt Text:

Given how seriously it impacts children's health, I wholeheartedly support the EPA's proposal to ban lead emissions from aircraft engines that run on leaded gasoline. Statistics from the study mentioned in Sections III A and V show that lead exposure has negative neurological and cognitive consequences on children. Since this legislation supports the health and future well-being of children, we need to make an effort to complete this proposal. We need the EPA to make certain that the thesis proposal is heard and that action is met. We must all work together to emphasize how crucial it is to stop using leaded gasoline in airplanes for the sake of everyone's health and the safety of adolescents. This proposal allows for health benefits, and I trust the EPA to take action on this proposal to keep the people safe.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0004

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

Please finalize this endangerment finding so that work with the Federal Aviation Administration can begin in earnest and not wait another 7 years. quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0436-0001

Commenter Type: Private Citizen

Commenter: Amador Torralba

Organization:

Excerpt Text:

Leaded fuel is a danger to our community.

Comment Number: EPA-HQ-OAR-2022-0389-0215-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

The following attachments are in support of the "Proposed Finding That Lead Emissions from Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare." The authors of the articles - Gary Keller and Miki Barnes - urge the FAA to finalize the endangerment finding without further delay and to expedite a ban on the use of leaded aviation fuel as quickly as possible. This submission is in addition to previous comments already entered into the record.

Comment Number: EPA-HQ-OAR-2022-0389-0226-0001

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: General Aviation Modifications, Inc.

Excerpt Text:

General Aviation Modifications, Inc. (GAMI) [Bold: is the only entity] that holds a comprehensive FAA approval to produce, sell and deliver to aircraft owner-operators for use in their aircraft, a high octane unleaded aviation gasoline as a complete fleet wide replacement for the existing ASTM D910 100LL (leaded) aviation gasoline that is currently used in all of the high performance spark- ignition piston powered aircraft in the world.

With that sweeping statement, please allow me to explain why I urge the EPA to move forward with its endangerment find, but to take that action with extraordinary consideration for the potential economic and (more importantly) [Bold: safety issues] that are clearly foreseeable and predictable in the event that the EPA attempts to impose an overly aggressive timeline for banning the existing high octane leaded aviation gasoline, known as 100 Low Lead, or 100LL.

Also, please bear in mind that these comments are made in the context that our small, innovative aviation company, located in Southeastern Oklahoma, has more to gain, economically and financially, by the early and rapid elimination of 100LL than any other entity in the world. [Bold: That is not an overstatement.]

Comment Number: EPA-HQ-OAR-2022_0389-0579-0001

Commenter Type: Private Citizen

Commenter: Pamela Weinstein

Organization:

Excerpt Text:

I was shocked to learn that only vehicles were converted to unleaded gasoline. How many flights take off every day? Thousands. We can't force other countries to use SAFs but we can. I was also dismayed to learn that the only reason that you haven't converted, is that it's not profitable. It takes no high-tech to switch to a lead-free alternative. What good will profits be when your kids start getting sick? You don't care about the most affected, but do you actually think that these unnecessary profits you've allowed & whatever benefits that you are receiving, will stop you & your progeny from suffering? Your wealth may buy you time, while the most vulnerable suffer, but you can only run for so long. Eventually all of our beautiful planet's floral, fauna, animals and fish will be wiped out. I understand that changing a way of life that makes some people enormously wealthy & powerful, seems to be more important than life itself. I've witnessed more than a few, on their death bed, as a nurse. Have never heard one regret not having not gotten another yacht or jet. They regretted not being better to others. You will have much to regret. Especially, ruining your grandchildren's futures.

Comment Number: EPA-HQ-OAR-2022-0389-0239-0002

Commenter Type: Private Citizen

Commenter: Alan Hoover

Organization:

Excerpt Text:

A ruling as proposed in this docket would significantly impact the viability of all who benefit from general aviation. Many would close businesses and livelihoods and completely shutdown the inspiration seen at airshows by historic aircraft, such as the iconic P-51 Mustang.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0001

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

The Alaska Department of Environmental Conservation (DEC), Department of Health (DOH), and Department of Transportation and Public Facilities (DOTPF) (collectively the State of Alaska or Alaska) appreciate the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, published in the Federal Register on October 17, 2022 (87 Fed. Reg. 62753).

The State of Alaska is concerned about this proposed endangerment finding as it could lead to banning low lead aviation gas, which currently has no economically viable alternative. Alaska strongly opposes any proposed rulemaking that could lead to the elimination of low lead aviation gas without a comparatively priced substitute fuel for widespread use.

Comment Number: EPA-HQ-OAR-2022_0389-0674-0001

Commenter Type: Private Citizen

Commenter: Burton Hunter

Organization:

Excerpt Text:

I hear from some of the small aircraft pilots (from Whiteman Municipal Airport in Pacoima, CA) that UNleaded aircraft fuel that will work in their airplanes is currently in development. They are looking forward to the opportunity to be more environmentally responsible by having non-leaded fuel running through the engines of their aircraft. The part of this that is causing some of them and some of us around the airport to cringe a bit, is when they say how long they have been told it will be before it is available to these pilots. Perhaps with a bunch of help from you, you can encourage this development and production process to speed-up. In so doing, you'll help those of us who think that "The sooner, the better!" will be of benefit to us all - including those fine pilots who are eagerly anticipating this new move toward "better air quality". Your help to speed things up may also help quiet some of the nay-saying voices that have risen-up to shout-out things like, "Shut down this airport, it's bad for us." or "We shouldn't have to breathe this toxic air anymore." or "Airports like this are just for rich people; what does it do for us in our community? It's just choking us." Your help to provide fuel for a safe and healthier way to fly will help quiet the energy of the enflamed voices of this nay-saying population; those who are attacking the existence of these essential airport resources in and near our communities. Thank you for anything and everything that you can do to safely speed-up the process.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0018

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

To recap key statements regarding Announcement of EPA's Proposed Endangerment Finding:

- Not unexpected and is the [bold: first step] in a [bold: multi-year, multi-step] regulatory process that [bold: will most likely] conclude with the [bold: eventual] removal of lead from avgas.
- Without compromising the safe and efficient operation of the fleet and the economic health of the general aviation community.
- EPA notice does not change the current production, distribution, sale, or use of 100 low-lead (100LL) fuel. A primary tenet of EAGLE is to ensure that 100LL remains available for the safe operation of the current fleet as the community transitions to unleaded fuel.
- General aviation's continued use of leaded avgas through the transition period will likely attract [italics: opposition] and result in growing pressure on airports and operators at the state and local levels. In addition, more airports face [italics: challenges] from local [bold: anti-airport] [italics: activists] looking to close or significantly reduce operations. The EPA announcement will undoubtedly be used by those groups.
- Goal is to avoid a patchwork of airport-specific requirements leading to inconsistent fuel availability. That [bold: could] create a situation where aircraft [bold: could] be [bold: mis-fueled], leading to safety and operational concerns.
- Ultimately working toward the same goal: a fleet-wide transition to an unleaded fuel by the end of 2030
- Currently, the FAA does not regulate avgas because the FAA has no authority to regulate fuels.
- Note that lead cannot be removed or "banned" from avgas by the EPA or FAA until all of these regulatory steps prescribed under the Clean Air Act are taken - likely not for a number of years.
- On September 1, the FAA issued supplemental type certificates to allow General Aviation Modifications Inc.'s (GAMI) 100-octane unleaded fuel (G100UL) to be reportedly used in every spark-ignition engine and every airframe powered by those engines.
- In addition to GAMI, three high-octane unleaded fuels continue to be evaluated. Swift Fuels is working through the FAA Supplemental Type Certification process while Afton/Phillips 66 and Lyondell/VP Racing are using the EAGLE fleet authorization process.

Comment Number: EPA-HQ-OAR-2022_0389-0530-0004

Commenter Type: Private Citizen

Commenter: Anne Wilson

Organization:

Excerpt Text:

The US aviation industry has assumed the role of flight training capital for the world and markets itself world-wide. Students come from China, Vietnam, Thailand, Syria and other countries to train here. Presumably this is cost effective for them - the pollution costs are completely externalized and their home countries don't have to bear that cost. There are alternative fuels. But due to vested self interests, the industry is highly resistant to making this change. This delay is unconscionable! We don't need more studies or data. We need action to protect our children, our own health, and our environment. EPA should make this finding ASAP and expedite the change to lead-free aviation fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0158-0003

Commenter Type: Private Citizen

Commenter: Jameson Walker

Organization:

Excerpt Text:

While acknowledging the effect of lead air pollution on the public and ruling to mitigate such pollution may harm the industries which produce such covered aircrafts and aircraft engines, the EPA's ruling will allow for greater innovation within these industries, thus creating a new market for more sustainable

airfare. Given the need for pollution mitigation for the state of the planet, this innovation is incredibly valuable and will play a pivotal role in emissions mitigation, airfare travel, and globalization.

Comment Number: EPA-HQ-OAR-2022_0389-0590-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I recommend we prohibit lead fuel and require aircraft to use green hydrogen. First we need to Nationalize the fossil fuel industry and begin to shut it down completely. We should seize their assets as well as the shareholder assets and use that to transition to clean energy.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0006

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

The FAA said in a statement, it's cleared the way for unleaded aviation fuel to be used throughout the nation's fleet of piston powered aircraft is a major step forward. It is said that it is pressing ahead with an initiative to develop new fuel as well as the network needed to provide and distribute them and its priority is safety. I believe the EPA proposed endangerment finding should be finalized and the Agency should move to issue new emission standards that will ban leaded aviation gas.

Comment Number: EPA-HQ-OAR-2022_0389-0648-0001

Commenter Type: Private Citizen

Commenter: Julian Park

Organization:

Excerpt Text:

The EPA must update its outmoded rules for lead in domestic paint and soil, as well as regulate aviation gasoline, the major source of lead emissions into the atmosphere, in order to safeguard children and communities from lead exposure. If the EPA truly cares about environmental justice and human health, it must immediately stop using leaded aviation fuel. Considering the fact that lead is so harmful to human health, most motor vehicles have been free of lead for the past 25 years. The EPA needs to act similarly for aviation gasoline, which is currently responsible for 70% of lead emissions into the atmosphere. Lead increases adult mortality and harms children permanently. The biggest source of lead in the air in the nation must be controlled by the EPA. Every day of delay increases the number of individuals breathing lead, including thousands of children. We implore the FAA to assist local governments, counties, and the EPA in this crucial procedure. Despite the fact that the government for decades disregarded the largest single source of lead airborne emissions in the nation, lead is well known to be harmful, especially to children. They must immediately stop using leaded aviation fuel. Lead exposure harms children's development irreparably and contributes to the over 500,000 adult deaths per year from cardiovascular disease. The Environmental Protection Agency must swiftly complete its risk assessment and collaborate with the Federal Aviation Administration to phase out leaded gas. The EPA's failure to control the principal source of lead emissions into the atmosphere is abhorrent. In order to uphold the Biden-Harris

administration's promises to safeguard children's health and advance environmental justice, regulating lead airplane gasoline is a critical step.

Comment Number: EPA-HQ-OAR-2022-0389-0219-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

Even the 2021 [Bold: "Options for Reducing Lead Emissions from Piston-Engine Aircraft"] from the National Academy of Sciences (NAS) fell far short with their recommendations for the removal of this toxic substance. There is no further testing that needs to be done. There is only one logical option for reducing leaded emissions – stop using it! [Bold: Now, not 8 years from now.]

Had the Dr. Zahran study been performed right after the Dr. Miranda study, the EPA should never have received a 2nd or a third Petition for Endangerment Finding. There would have been no need as the first one would surely have been the last.

Would the overwhelming evidence of this study have caused the National Ambient Air Quality Standard (NAAQS) to be lowered again in 2016? How would the Clean Air Scientific Advisory Committee (CASAC) have weighed the Reid-Hillview study? The EPA needs to stop pretending that they care about the federal standards for mobile sources of air pollution and their fuels through the Clean Air Act.

The GA industry needs to stop pretending that they're not poisoning our children. The FAA finally stopped pretending that they never had the unleaded fuel that all these planes could use in 2022, more than 10 years before it was brought to them for certification.

To allow the continued use of AvGas, the GA industry needed more than the mega dollars appropriated from Congress, which are our tax dollars. They needed more than the FAA's refusal to certify GAMIs G100UL unleaded fuel that was available since 2010. They needed to be sheltered from the Clean Air Act. They needed compliance and acts of omission from the EPA. And they got it. Not to reach an endangerment finding would be to continue the most abject failure of the EPA in their history.

Comment Number: EPA-HQ-OAR-2022-0389-0183-0007

Commenter Type: Private Citizen

Commenter: Sheetal Patel

Organization:

Excerpt Text:

Studies have shown that eliminating lead from automobile fuel, new residential paint, and plumbing systems over the past several decades have contributed to significant economic benefits. There is a lack of studies for nationwide IQ-related benefits from eliminating lead from aviation fuel. Most studies have only focused on the contribution of avgas to elevated lead levels at individual airports or regions. One study states that the total consumption of leaded avgas in the U.S. in 2008 was 248 million gallons. The most common formulation of avgas supplied in the U.S. has been "100 Low Lead" (100LL), which has a maximum lead concentration of 2.12 gPb/gal.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0025

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

B. A whole of government approach can facilitate the transition to unleaded avgas and minimize exposures while a complete phaseout is pending.

The EPA’s recent Strategy to Reduce Lead Exposures and Disparities in U.S. Communities recognizes the need for coordinated federal action to solve the leaded avgas problem, alongside the long-overdue emissions regulation that will result from this rulemaking process. Consistent with the Biden-Harris Administration’s government-wide approach to the climate crisis and environmental injustice,[Footnote 143: See Exec. Order No. 14008, 86 Fed. Reg. at 7622.] the Lead Strategy commits to addressing leaded avgas through a “whole of government” approach in coordination with the FAA and other agencies now, while fuel replacement programs and regulatory actions are pending.[Footnote 144: EPA Lead Strategy, supra note 79, at 37.] This inter-agency work includes implementing National Academy of Sciences recommendations regarding options for reducing lead emissions from piston-engine aircraft.[Footnote 145: Id.]

Putting this whole of government approach into action, the EPA together with the FAA should use resources to facilitate the transition to unleaded avgas and to mitigate exposures while the transition is underway. Particularly relevant to undersigned airport proprietors, the National Academy of Sciences recommends exploring public policy options that will enable greater use of available unleaded avgas, including providing airports with incentives and means to supply unleaded fuel.[Footnote 146: NAS Report, supra note 11, at 103 (Recommendation 5.2).] These incentives could take various forms, ranging from funding airports to purchase unleaded fuel STCs for pilots, to providing financial assistance to airports with only one fuel tank to install secondary fueling infrastructure so they can offer UL94 before unleaded 100-octane fuel is widely available. Additional mitigations that would benefit from federal assistance include changes in airport operations and practices to reduce aviation lead exposure, including educating airport personnel and the pilot community about the risks of lead exposure from leaded avgas and ways to minimize those risks,[Footnote 147: Id. at 84 (Recommendation 4.2).] and moving high-emitting run-up areas that are adjacent to communities or centers of human activity to other areas within the airport boundary.[Footnote 148: Id. at 85 (Recommendation 4.3).] The EPA could work with the FAA to administer these incentives by identifying and prioritizing high lead-emitting airports in densely populated areas to maximize public health and environmental justice benefits.

Comment Number: EPA-HQ-OAR-2022_0389-0271-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The government has disregarded a single source of lead that has persisted throughout the nation for decades despite the fact that lead is well recognized to be particularly hazardous to children. It should now stop utilizing gasoline with lead-air. Cardiovascular disease, which kills roughly 500,000 adults annually and permanently harms children's development, is brought on by lead exposure. EPA should engage with the Federal Aviation Administration to rapidly and gradually eliminate lead-containing avgas after completing the hazard's detection as soon as practicable.

Response to Comments on EPA's Authority Regarding Leaded Aviation Fuel

In this response, the EPA is focusing on addressing comments related to the EPA's authority regarding leaded aviation fuel. To the extent that these commenters raise other issues, those issues are addressed elsewhere in this RTC or in the final notice for this action. Additionally, the EPA responds to certain comments regarding the Agency's legal authority under CAA Section 231 in Section III.D of the final notice, including comments with respect to whether aircraft are included in the provisions of the CAA addressing mobile sources and the EPA's authority regarding aircraft, aircraft emissions standards, or leaded aviation fuels under the CAA. We respond to additional comments regarding leaded aviation fuel in this section.

Many comments address regulation of leaded aviation fuels. Many of these comments either assert or assume that the EPA has authority to regulate lead in aviation fuel and ask the EPA to exercise that authority. Examples of these comments include those stating that the EPA must or should ban leaded aviation gasoline or those requesting that the EPA adopt rules to eliminate the use of leaded aviation gasoline or eliminate regulations allowing TEL in any gasoline. Some comments state or suggest that the proposal would ban leaded gas used by the aviation community. Other commenters expressed a different view of the EPA's authority with respect to leaded aviation fuel, stating, for example, that the EPA does not have the legal authority to proceed with or implement this action as an attempt to regulate aviation fuel, or that the EPA does not have authority to ban 100LL in airplanes. Some of these commenters referred to the FAA's authority, for example, suggesting that FAA has all the authority necessary today to manage aircraft and their emissions, and suggesting that the proposal was an overreach by the EPA.

In response to the commenters who suggest that with this action, the EPA is banning, or will, should, or should not ban leaded avgas, we respond that these comments are beyond the scope of this action and thus require no further response, as the Agency neither proposed, requested comment on, nor is finalizing a ban on leaded avgas in this action, nor does the final action impose any restriction on the use of leaded avgas or establish a timeline for such restrictions. Further, the EPA notes that it does not purport to exert any regulatory authority over the composition or chemical or physical properties of aviation fuels in this final action. Accordingly, the EPA need not address the potential scope of its authority or the FAA's for such putative measures at this point. The EPA responds to comments about the Agency's legal authority for this final action in Section III.D of the final notice, and in Section 7.1 of this RTC document.

Many comments provide input about measures that they request or advocate for the EPA to take in regulating or otherwise addressing leaded avgas or the transition to unleaded fuels, the timing of such measures, and considerations that the commenters assert should be taken into account in establishing such measures (such as safety, costs, impacts on aviation, or impacts on particular communities). This includes, for example, comments stating that the EPA must ensure a safe and orderly transition to unleaded aviation fuels and that the Agency must not to come to premature conclusions and to follow the science and applicable statutory requirements during its consideration of the proposal and with respect to any related actions. Further it includes comments arguing that regulations allowing TEL in any gasoline must be eliminated and providing a list of references, without any explanation of how these references relate to the proposed findings. It also includes comments suggesting that EPA and FAA work together to address a number of various topics, such as the development of a strategy to expedite the transition to unleaded avgas, to mitigate exposures to airborne lead while the transition is underway, and to administer incentives that would encourage the use of unleaded avgas, especially at high-emitting airports in densely populated areas. In addition, this group also includes comments suggesting that the EPA and the FAA should assist with or prioritize making unleaded avgas available at airports, and comments suggesting that the EPA allow fuel suppliers to begin delivering avgas to targeted airport communities in California. This comment also suggests that the EPA could facilitate this process through a variety of useful incentives.

The EPA responds that these comments are beyond the scope of this action and thus require no further response, as the Agency neither proposed, requested comment on, nor is finalizing any regulatory action

with respect to leaded avgas, nor is it establishing any other measures (such as incentives or strategies) to address leaded avgas or the transition to unleaded fuels in this final action. The EPA responds to commenters stating that they are opposed to any rulemaking that could lead to the elimination of leaded avgas before a comparatively priced substitute fuel is available for widespread use in Section III.D of the final notice. Further, as described in Sections III.A and III.D of the final notice, as well as elsewhere in this RTC document, in this action, the EPA is addressing the predicate to regulatory action under CAA section 231 by making an endangerment and a cause or contribute finding in proceedings that are separate and distinct from any follow-on regulatory action; the EPA neither proposed, requested comment on, nor is finalizing any regulatory provisions in this action. In response to the comment that the Agency must not come to premature conclusions and follow the science and applicable statutory requirements, we note that the Administrator's decision on findings is informed by the extensive scientific evidence summarized in the final notice and the explanation of the EPA's interpretation of its statutory authority under section 231(a)(2)(A) of the CAA.

Relatedly, some comments raise points regarding the perceived effects of this action. For example, some comments suggest that a final endangerment finding will allow communities to work with local government to ban the sale of leaded avgas, while others suggest that it will potentially ground airplanes, causing harms in the aviation community or to minorities within that community. Some comments support the proposed endangerment finding, viewing it as a fundamental step toward establishing standards to phase lead out of aviation gasoline, while others express concern that it could lead to banning low lead aviation gas. One comment states that the EPA's notice does not change the current production, distribution, sale, or use of 100 low-lead fuel but asserts that it will be used by anti-airport activists in efforts to close or significantly reduce airport operations. Another commenter states that there is a lack of studies for nationwide IQ-related benefits from eliminating lead from aviation fuel. In response to these comments, the EPA notes, as described in the final notice for this action, these findings do not themselves apply new requirements to entities other than the EPA and the FAA. Accordingly, in issuing these final findings EPA is not banning leaded avgas, establishing new control measures regarding aircraft lead emissions, imposing restrictions on the use of leaded avgas, nor establishing any requirements related to aircraft operations (including not grounding aircraft or closing airports). The potential benefits (and costs) of eliminating lead from avgas are not relevant to this action. We further note that these findings are not risk assessments for individual airports in the U.S. While, in issuing these findings, the EPA does become subject to a duty to engage in a regulatory process regarding emission standards applicable to emissions of lead from covered aircraft engines, as discussed in Section III.C of the final notice, it is premature to draw any inference about what standards might be proposed, much less finalized, through that process. As such, these comments are beyond the scope of this action and thus require no further response. Furthermore, to the extent that these comments are based on assumptions about future actions that the EPA or third parties may take, they are speculative, and do not provide valid grounds to not finalize the findings. The EPA responds to related comments about how activists may use these findings in Section 7.2 of this RTC document.

One commenter states that leaded fuel had been banned at an airport by a local governmental body and suggested that having done so violates federal rules for airports that take federal funds for improvements. This comment appears to concern actions by entities other than the EPA, and thus is beyond the scope of this action and thus requires no further response. As noted previously, the EPA neither proposed, requested comment on, nor is taking any action with respect to airport operations.

Another commenter states that because the same pipelines transport both avgas and unleaded mogas there is an allowance of "up to 0.05 g lead per gallon of unleaded mogas," which the commenter asserts is unacceptable. These comments are outside of the scope of this action, as the EPA did not propose and is not taking any action with respect to pipelines, transport of fuels, or mogas in this action.

One commenter who urged the EPA to "move towards getting the lead out immediately" also asserts that the EPA has stated there is no safe level of lead emissions from aircraft since at least 2010 when it issued

the advanced notice of rulemaking for lead in aviation. In response, the EPA notes that this commenter misread or misunderstood the statement that the EPA made in the Advance Notice of Proposed Rulemaking on Lead Emissions From Piston-Engine Aircraft Using Leaded Aviation Gasoline issued in 2010 in which we stated that “EPA has long-standing concerns regarding exposure to lead, particularly during childhood. The most recent review and revision of the National Ambient Air Quality Standard (NAAQS) for lead, promulgated in 2008, found that serious health effects occur at much lower levels of lead in blood than previously identified and did not identify a safe level of lead exposure.”⁵ This statement by the EPA was not a determination about a safe level of lead emissions from aircraft, but rather a statement regarding the most recent science available at that time and reviewed in the context of the 2008 lead NAAQS.

One commenter who asserts that prohibiting lead in avgas before comparatively priced substitute fuel for widespread use is developed would create unintended consequences that would disproportionately impact rural Alaska and Alaska Natives, further claims that the federal trust responsibility to Alaska Natives may be violated by EPA’s rulemaking, unless mitigating actions are taken to ensure basic community access is available to rural Alaskan villages and their tribal members. To the extent these comments are premised on assumptions about future actions that the commenter believes the EPA may take that might have an impact on leaded avgas, these comments are not relevant to this action, as explained above in this section of the RTC document and in Section III.D of the final notice. Further, the EPA did not propose and is not finalizing in this action any requirement that would limit access to rural Alaskan villages or their tribal members. Further, the commenter references a January 26, 2021 Presidential Memorandum, which it asserts re-affirms Executive Order 13175. However, for the reasons described in Section VI.F of the final notice, this action does not have Tribal implications as specified in Executive Order 13175. The EPA will remain mindful of the trust relationship between the federal government and federally recognized tribes. We plan to continue engaging with tribes on this issue and will offer a government-to-government consultation upon request.

One commenter suggests that the proposal did not adequately address safety of aircraft engine operations and states that there is no discussion about the potential for adversely affecting the safety of aircraft operation and that the proposal fails to address CAA section 231(a)(2)(B)(ii). The EPA responds that, as discussed in Section III.C of the final notice, in this action the EPA is addressing the predicate for regulatory action under CAA section 231(a)(2)(A). In issuing these findings, the EPA becomes subject to a duty under CAA section 231 regarding emission standards applicable to emissions of lead from covered aircraft engines. However, the EPA has not yet proposed or issued such emissions standards. Section 231(a)(2)(B)(ii) provides that the “Administrator shall not change the aircraft engine emission standards if such change would significantly increase noise and adversely affect safety.” By its plain terms this provision applies when the Administrator is “chang[ing]” aircraft engine emission standards, but the EPA has not proposed, is not considering, and is not issuing or changing any such emissions standards in this action. Accordingly, CAA section 231(a)(2)(B)(ii) does not apply to this action.

A few comments raised concerns related to other environmental issues, such as climate change and depletion of the ozone layer. One commenter stated that the EPA must update its outmoded rules for lead in domestic paint and soil, as well as regulate aviation gasoline. The EPA acknowledges these comments but notes that such issues are beyond the scope of this action, which is focused on the lead air pollution and whether emissions of the lead air pollutant from covered aircraft engines cause or contribute to this air pollution. Accordingly, no further response to these comments is required.

As noted above, the EPA is responding to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses to comments related to the EPA’s finding that lead air pollution is reasonably anticipated to endanger public health and welfare, please see Section 5 of this RTC document. For responses to comments related to the EPA’s cause or

⁵ 75 FR at 22440 (Apr. 10, 2010).

contribute finding, please see Section 6 of this RTC document, as well as Section V.C of the final notice for this action. For comments regarding children’s health and lead emissions from aircraft, see Section 4 of this document. EPA responds to comments regarding its legal authority for this action in Section 7.1 of this RTC document, to comments regarding the legal framework for this action in Section 7.2 of this document, and to comments regarding aircraft engine emissions standards in Section 7.4 of this document.

Section 7.4 Considerations Related to Establishing Lead Emission Standards

Comment Number: EPA-HQ-OAR-2022-0389-0227-0003

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

B. EPA and FAA Regulatory Collaboration in Aviation Fuel Use and Safety

The EPA and FAA work together, in consultation, in relation to aircraft engine fuel regulation. The CAA expressly recognizes the importance of safety and efficiency with respect to aircraft operation, and roles of each agency. Once EPA has made both an endangerment and cause or contribute findings under Section 231(a)(2)(A), it may proceed with any related aircraft engine emissions standards only in consultation with the FAA. 42 U.S. C. [Section] 7571(a)(2)(b)(i). And EPA cannot adopt or alter aircraft engine emission standards if that action would “significantly increase noise” or “adversely affect safety.” 42 U.S. C. [Section] 7571(a)(2)(b)(ii). These CAA requirements are intended to involve the FAA in any standards-setting process, and contain a clear mandate to focus on aircraft safety when issuing any emissions standards for aircraft engines. [Footnote 8: As a backstop, the CAA further allows the President to disapprove any regulation adopted under Section 231 if such regulation would “create hazards to aircraft safety,” based on a related finding by the Secretary of Transportation. 42 U.S. Code (Section) 7571(c).]

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-013-0001

Commenter Type: Local Government

Commenter: Sydney Speizman

Organization: Stanford Environmental Law Clinic, on behalf of the County of Santa Clara

Excerpt Text:

My name is Sydney Speizman and I am a certified student attorney at Stanford Environmental Law Clinic. I am speaking today as outside counsel for the County of Santa Clara in strong support of the EPA proposed endangerment finding or caused and contributing finding. As Deputy County Executive Sylvia Gallegos and Dr. Lanphear just explained, leaded AVGAS has profound impacts for Santa Clara County residents, airport adjacent communities across the country and the public agencies that serve them.

Last fall, the country together with a national coalition of NGOs support of diverse local and regional agencies petitioned the EPA to make these long overdue findings for leaded AVGAS under Section 231 of the Clean Air Act. The EPA’s proposed finding are an important and necessary first step to address the issues raised in the petition but as the EPA has also recognized they are not sufficient to meet the crisis.

The next phase of the EPA's rule making as it sets and implements emission standards will be critical. As to the EPA's proposed finding, the evidence is overwhelming that lead emissions from piston-engine aircraft meet the criteria for regulations under Section 231(a) of the Clean Air Act.

Comment Number: EPA-HQ-OAR-2022-0389-0235-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Sierra Club

Excerpt Text:

We comment here to briefly address two issues. First, Clean Air Act section 231, 42 U.S.C. § 7571 (“Section 231”), applies not only to newly built aircraft and aircraft engines, but to existing ones as well. 42 U.S.C. § 7571 (a)(2)(A) (“[t]he Administrator shall . . . issue proposed emission standards applicable to the emission of any air pollutant [*Italics: from any class or classes of aircraft engines*] which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare”) (emphasis added). EPA has previously turned a blind eye to Congress’ instruction that it “shall” set standards for harmful emissions from “any” class or classes of aircraft engines, including in its recent standards for aircraft greenhouse gas and particulate matter emissions, and has limited its regulations to newly built aircraft and aircraft engines only—without explanation. See *Control of Air Pollution From Airplanes and Airplane Engines: GHG Emission Standards and Test Procedures*, 86 Fed. Reg. 2136 (Jan. 11, 2021); *Control of Air Pollution From Aircraft Engines: Emission Standards and Test Procedures*, 87 Fed. Reg. 72,312 (Nov. 23, 2022). We note that in the instant Proposal, EPA correctly determines that the proposed endangerment finding applies to all covered aircraft engines, not only to those newly built. For example, EPA defines “covered aircraft engines” and “covered aircraft” as “[*Italics: any*]” covered aircraft engine and covered aircraft capable of using leaded aviation gasoline, Proposal, 87 Fed. Reg. at 62,754 (emphasis added), and carefully lists the number of both existing and new covered aircraft and their emissions, *id.* at 62,759-60. Accordingly, once EPA finalizes the Proposal, it must issue standards for all aircraft, and may not exclude those that already exist; similarly, the Federal Aviation Authority must prescribe regulations to ensure compliance with those standards under Clean Air Act section 232, 42 U.S.C. § 7572. Depending on type, the service life of existing aircraft can span three or even four decades [Footnote 2: E.g., Bureau of Transportation Statistics, *Average Age of Aircraft 2018* (2018), available at <https://www.bts.gov/content/average-age-aircraft> (last visited January 13, 2023).], rendering the reduction or elimination of their lead pollution even more urgent.

Second, while EPA generally summarizes its obligations in making and acting upon a Section 231 endangerment finding correctly, it also states that the phrase “may reasonably be anticipated” and the term “endanger” in Section 231(a)(2)(A) “authorize, if not require, the Administrator to act to prevent harm and to act in conditions of uncertainty.” Proposal, 87 Fed. Reg. at 62,773 (emphasis added). To the extent this statement implies EPA has authority not to act to prevent such harm where it can feasibly do so after considering the statutory factors listed in Section 231 (technology, lead time, cost, safety and noise), this statement is incorrect. As EPA itself observed in its 2016 endangerment finding for aircraft greenhouse gases (which EPA here purports to summarize), the Supreme Court held that both “the Clean Air Act ‘and common sense . . . demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable.’” *Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare*, 81 Fed. Reg. 54,422, 54,435 (Aug. 15, 2016) (citing *Massachusetts v. EPA*, 549 U.S. 497, 507 n.7 (2007) (emphasis added)). Congress’s purpose in enacting the Clean Air Act was to promote “pollution prevention,” which it defined as the “reduction or elimination, through any measures, of the amount of pollutants produced or created at the source.” 42 U.S.C. § 7401(a)(3). Thus, when EPA

promulgates emissions standards for aircraft lead pollution after finalizing the Proposal, EPA will be obligated to act to reduce pollution and mitigate the harms these emissions cause.

Comment Number: EPA-HQ-OAR-2022-0389-0223-0010

Commenter Type: Advocacy Organization

Commenter:

Organization: Natural Resources Defense Council (NRDC)

Excerpt Text:

EPA must proceed promptly with emissions standards for avgas

EPA cannot stop at the endangerment finding, but must quickly proceed with emissions standards for avgas as well.

Upon making an endangerment finding, the Clean Air Act dictates that the EPA [*Italics: “shall . . .*] issue proposed emission standards.” [Footnote 52: 42 U.S.C. (Section) 7571(a)(2)(A) (emphasis added).] “By employing the verb ‘shall,’ Congress vested a non-discretionary duty in EPA.” [Footnote 53: *Coal. for Responsible Regul.*, 684 F.3d at 126.] Thus, “[i]f EPA makes a finding of endangerment” for avgas, “the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant” from piston-engine aircraft. [Footnote 54: *Massachusetts*, 549 U.S. at 533.]

EPA cannot allow FAA or industry opposition to stand in its way. True, the statute provides that EPA must “consult” with the FAA on aircraft engine emission standards, and that EPA “shall not change” such standards if the change “would significantly increase noise and adversely affect safety.” [Footnote 55: 42 U.S.C. (Section) 7571(a)(2)(B)(i)-(ii).] But consulting with the FAA does not mean deferring wholesale to that agency, particularly where, as here, any safety concerns are readily addressed by the availability of unleaded aviation fuel alternatives.

While many aviation advocates express their support for a shift away from avgas toward unleaded alternatives, they stop short of supporting regulatory efforts that would spur that shift and safeguard human health with the urgency that is needed.[Footnote 56: See, e.g., Public Comment from Nat’l Air Transp. Ass’n (NATA) to EPA (Nov. 7, 2022), https://downloads.regulations.gov/EPA-HQ-OAR-2022-0389-0163/attachment_2.pdf (describing NATA’s support for a “lead-free future for U.S. piston-engine aircraft,” but markedly withholding such support for EPA’s proposed endangerment finding); Proposed Endangerment Finding Regarding Lead Emissions from Aircraft Operating on Leaded Fuel, EPA 25, 26 (2022) (statement of Jim Coon, Sr. Vice President of Gov’t Affairs & Advoc., Aircraft Owners & Pilots Ass’n (AOPA)), <https://www.epa.gov/system/files/documents/2022-11/prop-endanger-finding-lead-emission-aircraft-publ-hear-trans-2022-11-01.pdf> (reiterating general aviation industry’s “firm and collective support in removing lead from aviation gasoline” but warning against doing so too quickly); Paul Millner, *Fuel For All: Unleaded Avgas Progress Report*, AOPA (Dec. 21, 2021), <https://www.aopa.org/news-and-media/all-news/2022/february/pilot/alternative-fuels-for-all> (reporting that Shell exited PAFI, an FAA initiative similar to EAGLE, in 2021 and “is awaiting EPA action on lead in avgas to support a business case for further fuel development. In other words, the company requires a mandate or deadline for the phase-out of lead before investing more in the project.”).] Instead, they tout voluntary measures such as FAA’s new Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative. That initiative aims to “eliminate the use of leaded aviation fuel by the end of 2030.” [Footnote 57: FAA, *EAGLE Initiative* (Dec. 14, 2022), <https://www.faa.gov/unleaded>.] These advocates’ views are misguided, for two reasons.

First, 2030 is far too late. As Congresswoman Rashida Tlaib rightly observed, “our children are already being poisoned now.” [Footnote 58: See, e.g., *Toxic Air*, supra n.12, at 16 (statement of Rashida Tlaib, Member of the Subcommittee, U.S. House of Representatives).]

Second, while industry advocates have expressed their “hope” that the piston-engine aircraft fleet transition to lead-free fuel sooner than 2030,[Footnote 59: Public Comment from NATA to EPA, supra n.56.] they ignore that many in the industry have been working alongside FAA to obstruct the development of lead-free alternatives [Italics: for decades.]

A recent investigative piece details this sordid history: “[FAA has] been on a quest to develop a replacement fuel on and off for three decades, with little to show for it. Why is it taking so long for the US to replace a toxic fuel dating from World War II? It’s a tale of bureaucratic obstruction, technical obstacles, and oil companies fighting to protect their profit margins.” [Footnote 60: Michael J. Coren, *Leaded airplane fuel is poisoning a new generation of American children*, Quartz (June 16, 2022), [https://qz.com/2173461/leaded-airplane-fuel-is-poisoning-a-new-generation-of-americans.](https://qz.com/2173461/leaded-airplane-fuel-is-poisoning-a-new-generation-of-americans/)] The article details how FAA started a “round of unleaded fuel testing through a program known as PAFI, short for the Piston Aviation Fuels Initiative. The top contenders were run through a gauntlet of trials starting in 2013, without success, followed by another round a few years later.” [Footnote 61: Id.] Through it all, industry players “defend[ed] their control over avgas and its replacement.” [Footnote 62: Id.] One former oil executive admitted to a “disinformation campaign,” in which industry “threw up all these objections . . . but that’s all a smokescreen.” [Footnote 53: Id.]

Those efforts successfully slowed the development of a 100-octane unleaded fuel alternative by General Aviation Modifications Inc. (GAMI). Stymied by the PAFI process and industry opponents, GAMI sought approval for its fuel under a supplemental type certificate instead. But there it continued to face delay and obstruction: the fuel underwent more than 12 years of rigorous safety testing and, even then, FAA headquarters held off on signing the approval for months. [Footnote 64: Id.; GAMI unleaded fuel approved for all general aviation aircraft, *Gen. Aviation News* (Sept. 3, 2022), [https://generalaviationnews.com/2022/09/03/gami-unleaded-fuel-approved-for-all-general-aviation-aircraft/.](https://generalaviationnews.com/2022/09/03/gami-unleaded-fuel-approved-for-all-general-aviation-aircraft/)] The FAA and aviation advocates have also resisted local jurisdictions’ attempts to phase out the use of leaded fuel. After Santa Clara County banned the sale of leaded fuel at Reid-Hillview, “the pushback was immediate.” [Footnote 65: Coren, supra n.60.] The FAA launched an investigation and threatened to pull federal funding, putting pressure on the County to delay the ban. [Footnote 66: Id.] AOPA also filed a formal complaint with the goal of “revers[ing]” the County’s ban. [Footnote 67: Eric Blinderman, *AOPA Files Complaint to Reverse Dangerous California County Fuel Ban* (Oct. 17, 2022), <https://www.aopa.org/news-and-media/all-news/2022/october/17/aopa-files-complaint-to-reverse-dangerous-california-county-fuel-ban.>]

Congressman Khanna convened a hearing last summer in which he called out this obstruction. He noted how, for years, “oil companies and aircraft interest groups” have “worked together to prevent [unleaded] fuel from getting FAA approval and spread disinformation about its qualities. Industry groups appear more concerned about disrupting business than about kids.” [Footnote 68: *Toxic Air*, supra n.12, at 2 (statement of Ro Khanna, Chairman of the Subcommittee, U.S. House of Representatives).] Congressman Khanna concluded that the FAA must “immediately commit to a faster timeline to reach a lead-free aviation future,” “stop deferring to powerful industry interests,” and “help, rather than obstruct, communities that want to ban leaded fuel.” [Footnote 69: Id.]

Against this backdrop, it is hard not to view FAA’s EAGLE initiative with immense skepticism. With two unleaded fuel alternatives already approved—including one that is usable fleetwide—and a third expected to be deployed in 2023, [Footnote 70: Id. at 15 (statement of Chris D’Acosta, Chief Exec. Officer, Swift Fuels).] the need for continued public funding of the EAGLE initiative is unclear.[Footnote 71: See Public Comment from NATA to EPA, supra n.56 (expressing support for the EAGLE initiative, including “provisions for increased funding in the upcoming FAA Reauthorization” and “infrastructure grants”).] The existing unleaded fuel alternatives are also proven to be safe. FAA officials told GAMI that its 100-octane unleaded fuel “is the most thoroughly tested and documented [supplemental type certificate] that has ever been done at the Wichita Aircraft Certification Office.” [Footnote 72: GAMI unleaded fuel approved for all general aviation aircraft, supra n.64.] And Swift Fuels’ 94-octane unleaded fuel has been

in use since 2015. [Footnote 73: Toxic Air, supra n.12, at 12 (statement of Chris D’Acosta, Chief Exec. Officer, Swift Fuels).]

Indeed, the use of this fuel at Reid-Hillview confirms that it is both safe and an effective replacement for leaded avgas: in the first six months since the ban on sales of leaded fuel took place, fuel vendors sold approximately 90 percent as much unleaded fuel as they sold leaded fuel during the first six months of 2021; total flight operations increased by 4 percent relative to 2021; and there were no reported safety incidents related to unleaded fuel.[Footnote 74: Testimony of Cindy Chavez, Santa Clara County Supervisor, District Two, supra n.26.] In fact, the FAA’s website now proclaims that it “has outlined a path that would allow the [Reid-Hillview] airport to have safe lead-free operations”—a marked shift in tune from just a few months ago. [Footnote 75: FAA, Eagle Initiative, supra n.57.] Consistent with the Clean Air Act’s mandate, then, emissions standards for avgas and a transition to unleaded alternatives would not “adversely affect safety.” [Footnote 76: 42 U.S.C. (Section) 7571(a)(2)(B)(i)-(ii).]

The use of unleaded fuel at Reid-Hillview carries other benefits as well. In addition to averting the release of hundreds of pounds of lead emissions, it lowers pilots’ own lead exposure, reduces aircraft maintenance costs, and has driven down the fuel’s price—making it competitive with the leaded alternative. [Footnote 77: Decl. of Harry Freitas Supp. Santa Clara Cnty. Mot. to Dismiss & Mot. for Summ. J. para. 23, 25-26, 39, AOPA v. Cnty. of Santa Clara, FAA Docket No. 16-22-08 (filed Dec. 29, 2022), https://downloads.regulations.gov/FAA-2022-1385-0009/attachment_1.pdf.] But for all this success, Santa Clara County has been unable to wholly eliminate lead emissions from the airport. [Footnote 78: Id. para. 41 (stating that aircraft using leaded avgas still use the airport “daily”).] To accomplish a full phase out of leaded avgas at Reid-Hillview—and airports just like it across the country— federal regulation is imperative.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0002

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

These findings should be finalized as soon as possible to give EPA the authority to set aircraft emission standards for lead under section 231 of the Clean Air Act. While we appreciate FAA’s plan to eliminate leaded fuel by 2030, we strongly urge EPA to speed up that timeline: reduce the use of leaded fuel by at least 25% by 2025 and eliminate all leaded fuel by 2028.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0029

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

The undersigned states welcome this important step EPA is taking to bring about much-needed changes to aircraft lead emission and fuel standards. We strongly support the Proposed Endangerment Finding, which is consistent with the precepts of the Clean Air Act and EPA’s ongoing work to reduce lead exposure and address disparities, and look forward to EPA issuing a final, affirmative endangerment determination this year. We also strongly urge the EPA to establish a timeframe to initiate the emission standards rulemaking for leaded avgas as soon as possible so that affected communities may benefit from the timely implementation of regulations addressing leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0001

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Our comments demonstrate that: (1) avgas poses serious public health and environmental justice concerns for states; (2) EPA should act swiftly to finalize the Proposed Endangerment Finding to protect communities in close proximity to general aviation airports from lead air pollution; and (3) EPA should initiate the emission standards rulemaking for lead in piston-engine planes as quickly as possible so that affected communities can benefit from the timely implementation of regulations addressing avgas. The Proposed Endangerment Finding is an overdue and crucial first step toward fulfilling the statutory goal set forth in 42 U.S.C. § 7571 (a)(1) of controlling the emission of harmful air pollutants from aircrafts.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0028

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

EPA Must Announce and Commit to a Timeframe for Promulgating Lead Emissions Standards for Piston-Engine Planes Pursuant to Section 231 of the Clean Air Act.

To protect communities from avgas-lead pollution and boost the commercial availability of unleaded aviation fuels upon finalizing the Proposed Endangerment Finding, EPA must immediately initiate a rulemaking to set lead emission standards for piston-engine planes. A final, affirmative endangerment determination by itself does not regulate lead emissions from piston-engine planes. EPA has acknowledged as much in the Proposed Endangerment Finding stating: “[t]he proposed findings in this action, if finalized, would not themselves apply new requirements.”[Footnote 61: 87 Fed. Reg. 62,753, 62,754 (Oct. 17, 2022).] However, an affirmative endangerment determination does set in motion a series of mandatory agency actions to impose and enforce new standards and regulations that will curb, if not eliminate, lead emissions from piston-engine aircrafts.

The Clean Air Act commands EPA, in consultation with the FAA, to promulgate lead emission standards consistent with an endangerment determination. 42 U.S.C. § 7571(a)(2). EPA has already indicated it will initiate a notice and comment rulemaking to set lead emission standards for piston-engine planes when it issues a final endangerment determination.[Footnote 62: Id. at 62,773-74.] However, those standards will not be self-executing. Once EPA has adopted lead emission standards for piston-engine planes, the FAA must then prescribe regulations to implement these emission standards. 42 U.S.C. § 7572(a). At that point, the FAA must also adopt aircraft fuel standards for piston-engine planes and promulgate regulations to enforce those standards. 49 U.S.C.

§ 44714. The aircraft fuel standards the FAA adopts must “control or eliminate” lead emissions consistent with EPA’s endangerment determination for avgas. Id.

Thus, substantive regulations addressing leaded avgas—how it will be regulated and when such regulations will take effect—will rest on the analysis and findings reached in EPA’s emission standards rulemaking. Because the rulemaking is so critical to the effective regulation of leaded avgas, EPA should provide certainty to affected communities and market actors that the agency intends to quickly follow through on its legal obligations following publication of a final endangerment determination.

Accordingly, EPA should commit to acting swiftly to adopt lead emission standards for piston-engine planes by announcing an aggressive timeframe for initiating a rulemaking, much as the agency did in January 2022 when it announced a timeframe for evaluating whether leaded avgas warrants an endangerment finding. Without a timely emission standards rulemaking for leaded avgas, the Proposed Endangerment Finding and final endangerment determination will fail to fulfill EPA’s mission and obligation to protect public health and welfare.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0023

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

The EPA should quickly eliminate lead emissions from avgas to prevent ongoing harm.

Regulation of leaded avgas is already sorely overdue. The EPA began phasing lead out of automobile gasoline 50 years ago under an analogous statutory provision.[Footnote 117: See 38 Fed. Reg. 33734 (Dec. 6, 1973) (issuing regulations designed to gradually reduce the content of lead in leaded automobile gasoline, because the EPA found that lead emissions presented a significant risk of harm to the health of urban populations, especially children).] and evidence has been clear for decades that lead emissions from aviation gasoline similarly contribute to damaging pollution. Since 2003, organizations have been calling on the EPA to issue an endangerment finding for leaded avgas.[Footnote 118: See Endangerment Finding, 87 Fed. Reg. at 62772 (discussing the 2003 letter to the EPA submitted by Friends of the Earth that initially raised the issue of an endangerment finding for leaded avgas).] As detailed above, the EPA’s delay in doing so has resulted in avoidable and ongoing harm to a generation of exposed individuals and billions of dollars in societal costs – impacts that are disproportionately borne by vulnerable communities including people of color, low-income populations, and young children.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0024

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

Other fully unleaded fuel options are likely to be available for use by the entire piston- engine fleet within the next several years. Swift Fuels expects that its 100-octane unleaded fuel (“100R”) will be ready for fleetwide approval in 2023 and available for use fleetwide within three years (by the end of 2025).[Footnote 128: See Baker, supra note 122.] Additional unleaded fuel candidates are or will be going through the FAA’s Piston Aviation Fuel Initiative (“PAFI”) testing and evaluation process.[Footnote 129: See FAA, White Paper: Piston Aviation Fuel Initiative (“PAFI”), https://www.faa.gov/about/initiatives/avgas/media/media/pafi_white_paper.pdf.] With fleetwide availability of both G100UL and 100R fuels expected in 2025-2027, combined with the existing supply of UL94 and the prospect of additional fuels gaining FAA approval through PAFI during this period, there is no justification for allowing leaded avgas to remain in use until 2030.

To expedite the transition, the EPA can and should attach an aggressive effective date to the standards’ elimination of lead emissions for the entire piston-engine fleet, with a full ban effective well before 2030. Section 231 of the Clean Air Act provides the EPA broad discretion to issue emissions standards, including standards with technology-forcing results.[Footnote 130: See Control of Air Pollution from Aircraft Engines: Emission Standards and Test Procedures, 87 Fed. Reg. 225 at 72316 (Nov. 23, 2022).]

The only limitations on EPA’s exercise of this discretion are that the standards not significantly increase noise or adversely affect safety under section 231(a)(2)(B), and that their effective date provide sufficient time for the development and application of the requisite technology and give appropriate consideration to compliance costs under section 231(b).[Footnote 131: 42 U.S.C. § 7571(a)-(b).] The EPA should exercise this discretion to adopt emissions standards that make a ban on lead emissions from piston- engine aircraft effective by the end of 2025. A 2025 effective date, which aligns with the earlier estimates of when the fuel industry anticipates that it could produce enough fuel to supply the current general aviation fleet under the current market conditions, will incentivize further investment by the fuel industry, airport proprietors, and aircraft owners to ensure that they are able to implement a timely transition to unleaded avgas. The EPA could structure some degree of regulatory flexibility into these rules, allowing for reasonable delay in fully effecting a zero- emissions standard to not later than 2027 if the unleaded fuel supply is insufficient at the time the ban would take effect. Bold emissions standards like those suggested here easily meet the requirements for technological feasibility and safety without imposing unreasonable costs.

First, given the significant recent advances in unleaded fuels, emissions standards that eliminate lead emissions from avgas in 2025 are technologically feasible and appropriate. As discussed above, even without regulatory incentives, UL94 is already on the market, at least one unleaded 100-octane fuel is expected to be available fleetwide in 2025, and additional unleaded 100-octane fuels are anticipated fleetwide by 2027. The EPA also has authority, and clear reason, to accelerate timelines for fuel transition by taking a technology-forcing approach to its emissions standards. But even if the EPA were to adopt standards that merely follow the available technology, there is no reason for emissions standards to allow lead air pollution from avgas to continue beyond 2027 given currently available unleaded fuel technology.

Second, far from impairing airport safety, removing lead from avgas is a safety imperative: Airports cannot be safely operated so long as leaded avgas remains in widespread use. As discussed above, the continued use of leaded avgas threatens the safety of airport workers who spend time in close proximity to aircraft during takeoff, and who are thereby at high risk of lead exposure. The continued use of leaded avgas also threatens the safety of airport-adjacent communities, who live with daily risks from lead air pollution caused by aircraft running on leaded avgas. Meanwhile, there is no evidence indicating that banning leaded avgas and replacing it with unleaded avgas presents a safety concern.

Finally, a rapid transition to unleaded fuels would not impose unreasonable costs on airport operators. Once 100-octane unleaded fuel is available, airports are not expected to need any new infrastructure to begin providing unleaded fuel. Both GAMI and Swift’s unleaded 100- octane fuels can be stored in the same airport fuel tanks as the 100-octane low lead fuel (“100LL”) that is universally used in general aviation operations.[Footnote 132: GAMI, Questions about G100UL avgas and Answers at 2, https://gami.com/g100ul/GAMI_Q_and_A.pdf [hereinafter “GAMI Q&A”] (“After extensive testing, no compatibility issues have been identified in any aircraft, engines, storage tanks or transportation systems. G100UL is a drop-in fuel, fully fungible with 100LL and other aviation gasolines, and ready to be used within the industry’s existing infrastructure.”); Swift Fuels, Frequently Asked Questions, <https://www.swiftfuelsavgas.com/faq> [hereinafter “Swift FAQ”] (“Our 100-octane unleaded avgas will be fully commingable [sic] with 100LL. This means that it can be stored in the same airport tank as 100LL ”); see also NAS Report at 90-91 (discussing convergence to 100LL avgas).] Additionally, airports with multiple fuel tanks can take immediate action to reduce lead exposure by procuring and providing UL94 for qualifying aircraft in existing secondary fueling infrastructure without additional infrastructure costs. The County of Santa Clara serves as a model for how airport proprietors with secondary fueling infrastructure can safely transition to unleaded fuels: The County has exclusively sold UL94 since January 1, 2022 when the County’s Board of Supervisors banned the sale of leaded avgas at its airports after researchers documented alarming blood lead levels caused by leaded avgas in communities near Reid-Hillview Airport,[Footnote 133: See Office of Communications and Public Affairs, Sale of Leaded Aviation Fuel Ends at Reid-Hillview and San Martin Airports, County of Santa

Clara (Jan. 6, 2022), <https://news.sccgov.org/news-release/sale-leaded-aviation-fuel-ends-reid-hillview-and-san-martin-airports>.] while maintaining protocols for accessing leaded avgas supplies in case of emergency.

Nor will the transition to unleaded avgas impose more than minimal costs on pilots. Few to no pilots will be required to modify their engines before transitioning to unleaded 100-octane fuel: G100UL is a drop-in fuel requiring no modifications,[Footnote 134: GAMI Q&A, supra note 132, at 1 (“Other than placards, no [engine] modifications are required [to use G100UL avgas].”).] and Swift Fuels expects 100R will be drop-in-ready for 85% of the piston-engine aircraft fleet.[Footnote 135: Swift FAQ, supra note 132 (answering “Is Swift Fuels’ 100-octane Avgas ‘Drop-In Ready’?”).] Additionally, as with airport fuel tanks, both fuels can be safely commingled with 100LL at any ratio in aircraft fuel tanks.[Footnote 136: GAMI Q&A, supra note 132, at 2 (answering “Are there any known material compatibility issues in aircraft, engines, storage tanks or transportation systems?”); Swift FAQ, supra note 132 (answering “Will I need a separate tank at my airport for your 100-octane avgas to fully replace 100LL?”).] Pilots’ primary cost for transitioning to unleaded fuel would be purchasing from the fuel manufacturer any necessary supplemental type certificate (“STC”) to modify the operating limits of their aircraft to provide for use of that fuel. Adding STCs is not an atypical expense for pilots; the FAA’s database of STCs contains over 47,000 entries.[Footnote 137: See FAA, Dynamic Regulatory System, <https://drs.faa.gov/browse/doctypeDetails> (as of Dec. 4, 2022) [filtering by Supplemental Type Certificates (STC)].] Currently, Swift Fuels’ STC is a one-time cost of \$100 covering all the manufacturer’s unleaded fuels, including UL94 and 100R,[Footnote 138: Swift FAQ, supra note 132 (answering “How much does a FOREVER Avgas STC certificate cost?”).] and GAMI indicates that its STC will be priced in a similar manner to other fuel STCs.[Footnote 139:] No STC is needed for fuels approved through the FAA’s PAFI fleetwide authorization process.[Footnote 140: GAMI Q&A, supra note 132, at 5 (“The STC pricing will be based on engines and horse-power, in a manner similar to the pricing for other fuel STCs that have been available for low octane gasolines.”).]

Additionally, the price of fueling up with unleaded avgas will not unreasonably increase over that of 100LL: UL94 is priced competitively with 100LL and the same will be true for 100R.[Footnote 141: Interview with Chris D’Acosta, CEO, Swift Fuels (Nov. 8, 2022).] In large batch volume production, G100UL is expected to be only \$0.85-1.00/gallon more expensive than existing 100LL.[Footnote 142: Interview with George Braly, supra note 126.] As discussed below, federal resources supporting the transition to unleaded fuels as part of the Biden-Harris Administration’s commitment to environmental justice could further reduce marginal costs. Moreover, any transition costs are dwarfed by the steep societal costs of continued lead exposure from leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0029

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

While finalizing the leaded avgas endangerment finding is a necessary step toward regulating this last remaining leaded transportation fuel, harmful lead exposures will continue until the EPA issues and implements emissions standards banning lead from avgas. A positive endangerment finding in and of itself does not require any changes to the operation of covered aircraft or engines. However, once an affirmative finding is made, the EPA will be required under section 231(a)(2)(A) of the Clean Air Act to issue piston-engine aircraft emissions standards for lead air pollution. A positive endangerment finding will also trigger the FAA’s duties under 49 U.S.C. section 44714 to prescribe fuel standards that control or eliminate lead pollution from avgas and under section 232 of the Clean Air Act to prescribe regulations to ensure compliance with EPA emissions standards.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0023

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et a

Excerpt Text:

Despite the public health and environmental justice imperatives of addressing this crisis rapidly, the FAA is advancing a prolonged timeline that will subject airport-adjacent communities, airport workers, and children to dangerous lead exposure for another seven years. In February 2022, the FAA and aviation and petroleum industry leaders announced an initiative to Eliminate Aviation Gasoline Lead Emissions (the “EAGLE Initiative”) by 2030. The 2030 elimination date has remained unchanged even after the EPA proposed this endangerment finding, despite the EPA’s recognition of significant health and welfare effects of leaded avgas and its creation of regulatory incentives to expedite unleaded alternatives. The EAGLE Initiative’s updated timeline incorporating this rulemaking maintains a five-year gap between the projected issuance of standards and the ultimate elimination of lead from avgas in 2030.[Footnote 119: See EAGLE, What do I need to know about EPA’s Proposed Endangerment Finding for Lead Emissions from Piston Aircraft? at 4.]

The EAGLE Initiative timeline lays out a multi-phased regulatory process. Once the endangerment finding is finalized in 2023, the EPA and FAA would concurrently undertake two- year rulemakings to issue emissions and fuel standards, respectively. These standards, which would be issued in 2025 under this timeline, would not be enforced for multiple years, as the FAA undertakes another multi-year rulemaking to issue certification standards under section 232 of the Clean Air Act. Even then, the EAGLE Initiative does not anticipate swift elimination of leaded avgas: “The publication of [the FAA’s] final rule does not in and of itself implement an immediate ban on the use of lead in aviation gasoline; however, it does signal its inevitable and eventual prohibition.”[Footnote 120: See id.]

Instead of accepting the EAGLE Initiative’s prolonged regulatory timelines, the EPA, in coordination with the FAA, should move as swiftly as possible to address this public health and environmental justice crisis, starting by issuing lead emissions standards during this Administration. The Agency need not wait until the endangerment finding is finalized to propose emissions standards. In fact, as the EPA noted in the proposed finding, past endangerment findings have been proposed concurrently with standards under section 231 of the Clean Air Act.[Footnote 121: Endangerment Finding, 87 Fed. Reg. at 62773.] Further, the content of appropriate emission standards is already clear: They must fully ban use of leaded avgas and lead fuel additives. The EPA should not delay on developing and proposing emissions standards and initiating the rulemaking process to ensure that emissions standards are issued by the end of 2024 under this Administration. Doing so would mark an important achievement in realizing the Biden-Harris Administration’s and the EPA’s own commitments to environmental justice, including the EPA’s recent strategy to reduce disparities in lead exposures.

Nor should the EAGLE Initiative’s unambitious 2030 target, which industry leaders acknowledge represents a worst-case scenario,[Footnote 122: See Baker, Unleaded Fuel: You’ve Got Questions, Aircraft Owners and Pilots Association (“AOPA”) (Oct. 1, 2022), <https://www.aopa.org/news-and-media/all-news/2022/october/pilot/presidents-position-unleaded-fuel>; see also National Air Transportation Association (“NATA”), Public Comment on Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare at 2 (Nov. 7, 2022), available at <https://www.regulations.gov/search/comment?filter=EPA-HQ-OAR-2022-0389> (“Even though 2030 is the target to achieve a fleet authorization, lead-free alternative to 100LL, we hope to obtain that goal much sooner with industry and government working together.”).] guide or constrain the EPA’s timeline for zero lead emissions. Nationwide transition to unleaded avgas will be possible years earlier, even

without regulatory incentives. Already, an unleaded fuel option – 94-octane unleaded fuel (“UL94”) manufactured by Swift Fuels – is approved for use by two-thirds of covered aircraft.[Footnote 123: See NAS Report, supra note 11, at 93.] More significantly,[Footnote 124: The development of unleaded 100-octane fuels is particularly significant because uptake of 94UL has faced significant barriers, including lack of secondary fueling infrastructure at many general aviation airports and steep costs of adding more fuel tanks. Moreover, the portion of the piston-engine aircraft fleet that requires 100-octane fuel accounts for a greater proportional share of fuel burn and flight hours. Thus, even with optimal adoption of 94UL, switching the lower-performance fleet to UL94 would only reduce the amount of lead consumed by about 30%. See id. at 80, 106.] multiple unleaded 100-octane fuels that could be safely used by the entire piston-engine fleet are anticipated to be ready at scale in the next few years. In September 2022, the FAA formally approved a 100-octane unleaded fuel (“G100UL”) invented by General Aviation Modifications, Inc. (“GAMI”) for use in the entire existing fleet of spark-ignition piston-powered engines and each of the aircraft that use those engines .[Footnote 125: See General Aviation News Staff, GAMI unleaded fuel approved for all general aviation aircraft, General Aviation News (Sept. 3, 2022), <https://generalaviationnews.com/2022/09/03/gami-unleaded-fuel-approved-for-all-general-aviation-aircraft/>.] The FAA’s review and approval process leading up to this effective fleetwide authorization included over 10 years of testing.[Footnote 126: Interview with George Braly, CEO, General Aviation Modifications, Inc. (“GAMI”) (Nov. 14, 2022).] GAMI expects to deliver the first shipments of G100UL to a small number of airports, including those operated by the County of Santa Clara, in the second quarter of 2023, and anticipates expanding availability to fill nationwide in the next four to five years (in 2026- 2027).[Footnote 127: Id.]

Comment Number: EPA-HQ-OAR-2022-0389-0214-0003

Commenter Type: State Government

Commenter:

Organization: State of California, Department of Public Health (CDPH)

Excerpt Text:

The Federal Aviation Administration (FAA) and the piston engine aircraft industry have teamed up to ensure the use of AvGas ends by 2030. The September 1, 2022 approval by the FAA of use of an unleaded gas for piston engine aircraft will help achieve that goal. CDPH appreciates such efforts for industry and agency partnerships to eliminate threats to public health.

An endangerment finding by EPA is an appropriate next step and can speed up the process. With piston engine aircraft being the largest single source of lead emissions in the U.S., and the lack of a safe threshold for childhood lead exposure, we encourage EPA to take up the task of proposing regulatory standards for lead emissions from aircraft engines.

Comment Number: EPA-HQ-OAR-2022_0389-0714-0005

Commenter Type: Private Citizen

Commenter: Ellie Lichti

Organization:

Excerpt Text:

If such findings indicate that leaded fuel, and the use thereof, endangers public health, then emissions standards would be more than appropriate.

Comment Number: EPA-HQ-OAR-2022-0389-0173-0003

Commenter Type: Private Citizen

Commenter: Robert Bartholomew

Organization:

Excerpt Text:

EPA transcription from handwritten comment: While I prefer to see problems solved on the local level, neither the city, county or state here are seriously addressing the 32% lead pollution caused by the airport, in our county. It is time for the federal government to protect it's citizens through the EPA and other departments.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0005

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

As explained in those filings, the nationwide problem of leaded avgas exposure requires an effective nationwide solution. Federal law limits the authority of state and local governments to directly regulate aviation fuel additives: Congress vested the authority and responsibility to set emission standards for air pollution from aircraft and engines in the EPA[Footnote 9: See 42 U.S.C. § 7571.] and the authority to prescribe fuel composition standards to control these emissions in the FAA.[Footnote 10: See 49 U.S.C. § 44714.]

A patchwork of efforts by committed local agencies cannot stand in for federal action. Public airport proprietors that have taken or proposed aggressive action to prevent exposures – such as the County of Santa Clara in banning the sale of leaded avgas at its airports, or the City of Santa Monica in preparing to remove fixed base operators from its airports and take over fueling operations – have been subject to investigation by the FAA or other obstacles. Other public airport proprietors have found it challenging to eliminate lead fuel sales on their own due to difficulties in sourcing unleaded fuels, capital costs for additional fueling infrastructure, and challenges in helping pilots obtain type certifications for fuel switching, among other things.[Footnote 11: See, e.g., Transp. Rsch. Bd. et al., Options for Reducing Lead Emissions from Piston-Engine Aircraft 3 (Nat'l Acads. of Scis., 2021) [hereinafter “NAS Report”] (explaining that so long as they must also provide a higher-octane leaded fuel, “thousands of small airports would need to invest more than \$100,000 in a second avgas storage and dispensing system” to dispense 94 octane unleaded avgas), id. at 19 (“[A]ircraft owners interested in switching to unleaded fuels may find this recertification option prohibitively expensive, except in cases where a supplemental [type certificate] is already available at moderate cost.”); id. at 102 (explaining that “the costs for airports to add storage and distribution facilities for a second fuel could be significant and potentially prohibitive, especially for small airports”).] And even if public airport proprietors do eliminate leaded avgas sales at their airports, such action does not prevent airplanes from fueling up with leaded avgas elsewhere and transiting through their airports.

Agencies without proprietary control over general aviation airports have even fewer options, regardless of whether the impacts of lead emissions occur primarily within their jurisdictions. The Town of Middleton, for example, is invested in addressing lead emissions from a general aviation airport operated by the neighboring city, which exposes Town residents to ongoing lead air pollution. Dane County, Wisconsin, where the Town of Middleton is located, has the second highest amount of lead aircraft emissions of the 72 counties in Wisconsin. Thirty-two percent of all airborne lead emissions annually in Dane County are from operation of City of Middleton Municipal Airport – Morey Field (“Morey Airport” or “C29”).[Footnote 12: Trinity Consultants, Measurement of Ambient Lead Concentrations Around the

Middleton Wisconsin Municipal Airport – Morey Field (C29) 2-7 (Sept. 15, 2022), available at https://town.middleton.wi.us/vertical/Sites/%7B97A50AAB-3824-4833-ACEA-EF2B9A14C856%7D/uploads/C29_Airport_Lead_Report_091522-3_email.pdf [hereinafter “Morey Airport Lead Study”].] Due to prevailing westerly winds, at least 70% of aircraft departures from Morey Airport occur over the Town of Middleton and the adjacent Town of Springfield.[Footnote 13: See Mead & Hunt, Middleton Municipal Airport Morey Field (C29) Master Plan 4-20 to -21 (June 2022), <https://www.cityofmiddleton.us/DocumentCenter/View/10416/C29-Master-Plan-Report-without-appendices-2022-07-21?bidId=> [hereinafter “C29 Master Plan”] (discussing utilization of Morey Airport’s Runway 28).] But the Towns have no authority to limit leaded avgas sales or provide unleaded avgas fueling at the neighboring City airport. And although Swift Fuels has been producing a fully unleaded avgas (94-octane “UL94”) since 2015, this unleaded fuel alternative usable by two-thirds of the piston-engine fleet[Footnote 14: See Swift Fuels, Frequently Asked Questions, <https://www.swiftfuelsavgas.com/faq> (last visited Dec. 28, 2022) (answering “What is UL94 Unleaded Avgas?”); see also Section II.A infra.] is not sold at Morey Airport. To the contrary, use of UL94 has contracted in Wisconsin in recent years, highlighting the challenges of reducing lead emissions without regulatory standards. According to the Wisconsin Bureau of Aeronautics, “In 2020, UL94 was available at five Wisconsin airports. By the end of 2021, it was only available at two airports each with less than \$4,000 gallons [sic] sold.”[Footnote 15: Wis. Bureau of Aeronautics, 2021 Wisconsin Airports Rates and Changes Survey 10 (June 2022), <https://wisconsin.gov/Documents/doing-business/aeronautics/resources/rates-chgs.pdf>.]

Ultimately, the only way to keep general aviation airports safely operating is through the promulgation of uniform national regulatory standards that quickly eliminate use of leaded avgas.

Comment Number: EPA-HQ-OAR-2022-0389-0238-0004

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

Given the severe and avoidable harm from the continued use of leaded avgas, we also urge the EPA to proceed swiftly to the second phase of this rulemaking and finalize emissions standards that eliminate lead from aviation fuel on a timeline that matches the urgency of the public health crisis. A rapid phaseout of lead from avgas is technologically feasible and can be done safely, without undue cost: The Federal Aviation Administration (“FAA”) has already certified a fully unleaded fuel that is safe for use by the entire piston-engine fleet. Urgent action is further compelled by the Biden-Harris Administration’s and the EPA’s own commitments to advancing environmental justice, including the EPA’s recent strategy to reduce lead exposures in communities overburdened by pollution. Moreover, rapidly banning leaded avgas is ethically necessary. In the decades that this endangerment finding has been pending, millions of children nationwide have suffered irreversible harm from unregulated leaded avgas. We ask that the EPA finalize its proposed findings and fulfill its mandate by quickly eliminating this pollutant.

Comment Number: EPA-HQ-OAR-2022-0389-0260-0001

Commenter Type: Private Citizen

Commenter: Robert Barrows

Organization:

Excerpt Text:

1. Should the EPA proceed to propose emission standards under CAA section 231, CAA section

231(a)(2)(B) further directs the EPA to consult with the Administrator of the FAA on such standards, and it prohibits the EPA from changing aircraft emission standards if such a change would significantly increase noise and adversely affect safety.

Isn't the risk of lead poisoning a safety issue? It is unfortunate it has taken so long for action to eliminate the use of leaded fuel in piston powered aircraft. It should have been eliminated at the same time it was for automobiles. I believe part of the problem is that the FAA has not considered lead poisoning from aircraft a safety issue by definition. How is putting at risk the lives and health of neighbors living in close proximity to airports with planes emitting poisonous leaded emissions not a safety issue? From my viewpoint, FAA policies basically promote airports doing whatever and whenever they want without restriction. Standards need to be set immediately because it most certainly is a safety issue. Such standards would promote safety not adversely affect it. Safety has been compromised by the mere fact that we have been living with and breathing these leaded emissions far too long.

2. CAA section 231(b) states that the EPA determines, in consultation with the U.S. Department of Transportation (DOT), that the effective date of any standard provides the necessary time to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance.

Time is of the essence and standards need to imposed immediately. The FAA, regional airports, flight training centers etc. have been aware of this issue for several years without doing anything. Their has been a lack of transparency on this issue on their part. They continue to fly over our homes poisoning the air we breathe as if it is business as usual. It was just 6 months ago that some of the people in our Danvers' neighborhoods found out that the planes from Beverly Regional Airport flying over our homes (sometimes as many as 150 times a day) were using leaded fuel. Most of the people in our neighborhoods still are not aware. They have had sufficient time to plan for the eventual elimination of leaded fuel yet continued to operate without regard for their neighbors. Standards should be imposed immediately and airports and piston powered plane owners should have to either comply with the standards, suspend their flight activities or have flight patterns changed so the most densely populated neighborhoods are no longer exposed to the harmful effects of lead poisoning. Cost to comply by airports and plane owners should be irrelevant given the seriousness of the issue. We can't seriously be asking and expecting people to live with the harmful effects of lead poisoning any longer? People, not business and commerce should be the primary concern.

Comment Number: EPA-HQ-OAR-2022-0389-0772-0001

Commenter Type: Local Government

Commenter:

Organization: Arapahoe County, Board of County Commissioners

Excerpt Text:

On behalf of the Arapahoe County, Colo. Board of County Commissioners, thank you for the opportunity to provide public comments regarding the proposed endangerment finding for lead emissions from aircraft engines. Our county is home to one of the busiest general aviation airports within the country- Centennial Airport - which accommodated 314,071 civil and military aircraft operations in 2021. We applaud Centennial Airport's proactive leadership in the transition away from leaded aviation fuels. The Board believes when community, business, and government work together, we achieve more positive outcomes.

We understand the public and economic benefits general aviation provides, while also acknowledging the public health impacts noise and leaded emissions pose. Our hope is that the regulatory process being advanced by the Environmental Protection Agency, coupled with the Federal Aviation Administration's initiative to transition from lead-based fuels will address the health and safety impacts we hear about from

residents.

The Board is supportive of efforts to smoothly transition to a lead-free aviation system in an expeditious manner that places resident public health and safety at the forefront of decision making. We are committed to engaging in the future regulatory process and request you include Arapahoe County in future notifications to ensure participation.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0007

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

The aviation industry has had 52 or so years of notice [Footnote 10: 42 U.S.C. United States Code, 2013 Edition Title 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 85 - AIR POLLUTION PREVENTION AND CONTROL SUBCHAPTER II - EMISSION STANDARDS FOR MOVING SOURCES Part B - Aircraft Emission Standards Sec. 7571 - Establishment of standards From the U.S. Government Publishing Office, www.gpo.gov <https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapII-partB-sec7571.htm>] that leaded aviation fuel is under scrutiny related to lead emissions. Unfortunately, that notice [Footnote 11: 42 U.S.C. United States Code, 2013 Edition Title 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 85 - AIR POLLUTION PREVENTION AND CONTROL SUBCHAPTER II - EMISSION STANDARDS FOR MOVING SOURCES Part B - Aircraft Emission Standards Sec. 7571 - Establishment of standards From the U.S. Government Publishing Office, www.gpo.gov <https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapII-partB-sec7571.htm>] included language at 7571(a)(2)(B)(ii) which states: [Italics: “The Administrator shall not change the aircraft engine emission standards if such change would significantly increase noise and adversely affect safety.”] N.B. [Underline: There is no mention of safety of child development.] I would ask that the EPA address this language quoted above from 7571(a)(2)(B)(ii).

Comment Number: EPA-HQ-OAR-2022-0389-0222-0003

Commenter Type: Private Citizen

Commenter: Dorinne Tye

Organization:

Excerpt Text:

I understand egregious systemic maladies were in place before most of you who now represent the EPA were there, but it is past time to exercise the intent and authority of your agency and mandate an immediate discontinuation of this neurotoxic air pollutant distributed via ultrafine particulate matter.

Being exposed to lead is an unjust, unnecessary and cruel burden to place on our country, the collective IQ, citizens and especially children for non-essential activity, potentially causing irreversible lifelong injury to all life below and nearby. Please expedite the rule making and order an immediate discontinuation of all non-essential flight until transitioned.

I implore the EPA to return to your roots, which were NOT participatory with big pollution. Please do not allow one more day of underestimated cumulative impacts from piston engine lead, which benefit only a very tiny portion of individuals.

Comment Number: EPA-HQ-OAR-2022-0389-0239-0003

Commenter Type: Private Citizen

Commenter: Alan Hoover

Organization:

Excerpt Text:

I urge the Administrator to consider the comments of the Coalition for Sustainable Aviation, allow the FAA to implement the Cone of Distinguishable Aviation Lead Emissions (CODALE) concept, and allow the reduction of lead emissions as lead by the FAA to proceed in a way that protects the safety of general aviation and the health and welfare of the public.

Comment Number: EPA-HQ-OAR-2022-0389-0262-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: New Jersey Progressive Equitable Energy Coalition (NJPEEC)

Excerpt Text:

Additionally, Objective 2.2 in EPA’s Strategic Plan includes “[m]aking commitments on [Italics: measurable environmental and public health improvements] in overburdened and underserved communities.”[Footnote 24: Id. at 32 (emphasis added).] EPA could attain this objective by increasing air monitoring of lead in OBCs to collect data on actual lead air emissions reductions in New Jersey’s OBCs, and Environmental Justice Communities around the country. According to EPA’s National Emissions Inventory (“NEI”), the counties in New Jersey that are most impacted by lead air emissions are Bergen, Essex, Union, and Mercer Counties.[Footnote 25: National Emissions: 2017 County Emissions, U.S. Env’t Prot. Agency, https://edap.epa.gov/public/extensions/nei_report_2017/dashboard.html#sector-db (last visited Jan. 10, 2023).] In 2017, these counties experienced the highest airborne lead levels per square mile from aircrafts—approximately 661 pounds in Bergen and Essex Counties; 220 pounds in Union County; and almost 441 pounds in Mercer County.[Footnote 26: Id.] The New Jersey Department of Environmental Protection’s (“DEP’s”) EJ mapping tool, called EJMAP, indicates that the communities surrounding major airports in New Jersey, including Newark Liberty International Airport[Footnote 27: See Newark Liberty International Airport, <https://www.newarkairport.com/> (last visited Jan. 10, 2023)] and the Trenton-Mercer Airport,[Footnote 28: See Mercer County: Trenton-Mercer Airport, N.J. Mercer Cnty., <https://www.mercercounty.org/departments/transportation-and-infrastructure/trenton-mercerairport> (last visited Jan. 10, 2023).] are both adjacent to OBCs.[Footnote 29: Environmental Justice Mapping, Assessment and Protection Tool (EJMAP), N.J. Dep’t Env’t Prot., <https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6> (last visited Jan. 10, 2023).]

EPA should, in conjunction with any proposed lead emissions standards, increase oversight or overall air monitoring in OBCs located near airports. As discussed above, OBCs—and especially Black communities—experience more lead exposure and more of its associated cognitive and developmental impacts. Because of this, EPA should commit to prioritizing OBCs and Environmental Justice Communities by focusing enforcement of future air emissions standards on aircrafts utilizing leaded fuel in those communities, and by increasing air monitoring efforts. Doing so would ensure that OBCs and Environmental Justice Communities feel the benefits of any promulgated lead air emissions standards and regulations first, which should be the case since they are the most severely impacted. Additionally, increasing air monitoring efforts in these communities would provide tangible data and evidence that EPA’s efforts are materially decreasing lead levels in air emissions, and that OBCs are actually benefiting directly from EPA action. These actions would also show that EPA is taking steps toward the Environmental Justice goals outlined in its 2022–2026 Strategic Plan. [Footnote 30: See FY 2022-2026

Comment Number: EPA-HQ-OAR-2022_0389-0451-0001

Commenter Type: Private Citizen

Commenter: Cynthia Hathaway

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to Create rules that TRANSITION away from the use of 100 octane low-lead aviation gasoline (avgas) to the use of 100 octane NO Lead gasoline. Alternative fuel has already been developed. Support stringent testing of these alternatives to be sure of their safety- then implement the rigid use of them by FAA regulations.

Comment Number: EPA-HQ-OAR-2022_0389-0714-0004

Commenter Type: Private Citizen

Commenter: Ellie Lichti

Organization:

Excerpt Text:

Should the EPA finalize such findings, the impact that such findings will have on emission standards, and thus aircraft manufacturers and flight schools, must be considered. While there is absolutely no question as to the necessary protection of human health and welfare, many communities, individuals, and organizations are supported by the operation and manufacturing of leaded fuel aircraft engines. Such findings should initiate increased research and investment in long-term technical developments. There are also many flight schools that use piston-engine aircraft relying on 100LL. If such findings are indeed affirmative, a progressive approach to eliminating or controlling such emissions must be considered. Otherwise, the productivity of many flight schools and manufacturers, as well as the flow of qualified pilots, could be interrupted.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0005

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-[bold: EPA Part-II]: The other aspect of the EPA's proposed endangerment finding pertains to whether practical methods exist to eradicate the toxic lead emission problem from avgas.

-[bold: Swift Fuels Answer]: Yes, Swift Fuels believes we have developed technically feasible alternatives (i.e. UL94 and 100R unleaded avgas) for reducing and ultimately eliminating such toxic lead emissions from avgas. Transitioning away from leaded avgas to commercially viable alternatives has already begun by using UL94 unleaded avgas in targeted standalone tankage. For example, [underlined: nine Fixed Base Operators (FBOs) in California including four FBOs at Reid Hillview Airfield currently buy UL94 [bold: unleaded avgas] from Swift Fuels to service a majority of their local piston aircraft fleet, including their highly active flight schools, thus totally eliminating toxic lead emissions from the exhaust of those aircraft by only using UL94 unleaded avgas.] In addition, our 100R high-octane unleaded avgas will continue to be actively developed by our firm for nationwide deployment in existing airfield tankage over the next 3+ years in collaboration with industry and FAA personnel.

Comment Number: EPA-HQ-OAR-2022_0389-0533-0005

Commenter Type: Private Citizen

Commenter: Nina Koltnow

Organization:

Excerpt Text:

The US aviation industry has assumed the role of flight training capital for the world and markets itself world-wide. Students come from China, Vietnam, Thailand, Syria and other countries to train here. Presumably this is cost effective for them - the pollution costs are completely externalized and their home countries don't have to bear that cost. There are alternative fuels. But due to vested self interests, the industry is highly resistant to making this change. This delay is unconscionable! We don't need more studies or data. We need action to protect our children, our own health, and our environment. EPA should make this finding ASAP and expedite the change to lead-free aviation fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0009

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

For the safety of our communities and the environment, the elimination of lead from aviation fuel used in general aviation spark-ignition engines is greatly needed. CARB urges EPA to both formally acknowledge this endangerment and work with the FAA to develop a strategy to expedite the transition to the use of unleaded avgas as quickly as possible.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0006

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

While the Federal Aviation Administration (FAA) has recently issued supplemental type certificates that allow G100UL unleaded aviation fuel to be used in every general aviation spark-ignition engine and every airframe powered by those engines [Footnote 10: General Aviation Modifications, Inc. <https://gami.com/g100ul/news.php>.], this fuel, or others like it, is not readily available for wide-spread use. An endangerment finding triggers a Clean Air Act requirement for EPA to set standards to control the relevant emissions (with FAA consultation and implementation). Further, the Clean Air Act requires that these standards should not compromise aircraft safety [Footnote 11: 42 U.S.C. §§ 7571(a)(2), 7572; 49 U.S.C. § 44714.].

While the goal stated under the FAA's Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative is to eliminate the use of leaded aviation fuel by the end of 2030 [Footnote 12: FAA Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative <https://www.faa.gov/unleaded>.], CARB urges EPA and FAA to undertake measures to eliminate lead emissions from general aviation spark-ignition engines on a much more expedited timeline. Based on the FAA's timeline, a child born today in a community with elevated lead levels, due to leaded aviation fuel, will spend the first seven years of his or her life exposed to those dangerously high levels. Since the first seven years of life are some of the most critical

developmental years, it is extremely important that the EPA and FAA expedite the transition to unleaded aviation fuel.

Response to Comments Regarding Considerations Related to Establishing Lead Emission Standards

In this response, the EPA is focusing on addressing comments related to the EPA's authority regarding establishing lead emissions standards. To the extent that these commenters raise other issues, those issues are addressed elsewhere in this RTC or in the final notice for this action. Additionally, the EPA responds to certain comments regarding the Agency's legal authority under CAA Section 231 in Section III.D of the final notice, including comments with respect to the EPA's authority regarding aircraft, aircraft emissions standards, or leaded aviation fuels under the CAA.

Some commenters restate aspects of the EPA's interpretation of its authority under the CAA section 231 as articulated in the proposal, without criticizing the EPA's interpretation or offering a different interpretation. The EPA acknowledges these supportive comments and notes that, for the reasons described in Section III of the final action, its interpretation of its authority related to aircraft emissions standards is the same as it was in the proposal. Accordingly, these comments require no further response. Though the EPA is not proposing or finalizing aircraft emission standards in this final action, for purposes of public information and providing context for this action, the EPA summarizes its regulatory authority for aircraft emission standards, as well as other aspects of the provisions related to aircraft emissions in Part B of title II of the CAA, in Section III.C of the final notice for this action.

Many commenters on the topic offer views regarding future standards for lead emissions from aircraft engines, including, for example, their views on the EPA's duty under the Clean Air Act to issue such standards, their recommendations on the timetable for setting or implementing such aircraft emission standards, as well as various considerations that they assert or suggest the Agency should consider when establishing such standards, such as fuel availability, technological feasibility, aircraft safety, costs, public health and environmental justice, which aircraft must be covered by such standards, what the effect of such standards should be, and coordination with FAA. Some commenters support federal action, stating that federal law limits the authority of state and local governments to directly regulate aviation fuel additives and that there are other challenges to local action to address lead emissions from airports. Some commenters offer their interpretations of CAA section 231(a)(2)(B)(ii) and how that provision should be accounted for in standard setting; one commenter requests that the EPA address this provision in this action. The EPA responds that these comments are beyond the scope of this action and thus require no further response, as the Agency neither proposed, requested comment on, nor is finalizing in this final action any such emissions standards or indeed any regulatory requirements applicable to lead emissions from aircraft engines. Further, contrary to the interpretation of one commenter, EPA did not indicate the Agency would propose or issue such standards at the same time as this final action at page 62773 of the proposal. To the extent that commenters state general objections to the EPA's authority to establish aircraft engine emissions standards, the EPA disagrees for the reasons described in Section III of the final notice, including Section III.D, and elsewhere in this RTC document; to the extent that they express more specific concerns, those are beyond the scope of this action as previously described. As explained in section 7.3 of this RTC document, CAA 231(a)(2)(B)(ii) does not apply to this final action.

Another commenter suggests that the EPA "should, in conjunction with any proposed lead emissions standards, increase oversight or overall air monitoring in OBCs located near airports. ... EPA should commit to prioritizing [Overly-Burdened Communities] and Environmental Justice Communities by focusing enforcement of future air emissions standards on aircrafts utilizing leaded fuel in those communities, and by increasing air monitoring efforts." The EPA responds that this comment relates to the commenter's views on potential future proposed standards and potential future actions, including

oversight, enforcement, and air monitoring near airports, which are all beyond the scope of this action and require no further response. We also note that comments regarding air monitoring are further discussed in Section 8.2.1 of this RTC document, and comments regarding environmental justice are further discussed in Section 3 of this RTC document. Some comments discuss their views on prior emissions standards that the EPA has established under CAA section 231, including recent standards for aircraft greenhouse gas and particulate matter emissions. To the extent these comments are related to existing standards for other pollutants, they are beyond the scope of this action and require no response, as this action does not address those standards; to the extent that they are targeted at potential future emission standards, they are also beyond the scope of this action and require no further response for the reasons explained earlier in this response.

As noted above, the EPA is responding to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses to comments related to the EPA's finding that lead air pollution is reasonably anticipated to endanger public health and welfare, please see Section 5 of this RTC document. For responses to comments related to the EPA's cause or contribute finding, please see Section 6 of this RTC document, as well as Section V.C of the final notice for this action. The EPA responds to commenters who argue that runup areas should be moved away from surrounding communities to dilute and, therefore, solve the issue of elevated lead concentrations from covered aircraft in Sections 6.2.2 and 6.2.3 of this RTC document. EPA responds to comments regarding its legal authority for this action in Section 7.1 of this RTC document, to comments regarding the legal framework for this action in Section 7.2 of this document, and to comments regarding its authority to address leaded aviation fuel in Section 7.3 of this document. EPA responds to comments related to FAA and industry programs in Section 8.5 of this document. EPA also responds to comments regarding environmental justice in Section 3 of this document.

Section 8. Miscellaneous Topics

Section 8.1. Comments on the History of Petitions Regarding Lead Emissions from Aircraft and the EPA Responses

Comment Number: EPA-HQ-OAR-2022-0389-0138-0002

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

Relative to their harm, regulation of lead pollutants have, historically, been federally neglected. In addition to failing to recognize lead pollution in the “nonroad” subsection of 2015 EPA Regulations for Emissions from Vehicles and Engines, [Footnote 4: United States Environmental Protection Agency. (2015). Regulations for Emissions from Vehicles and Engines. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-aircraft>] environmental advocacy efforts have, arguably, been undervalued. [Bold: As mentioned in the Leaded Fuel Proposed Finding, Friends of the Earth began petitioning to the EPA in 2003 to address lead emissions from avgas, the initial letter for which was received for the Leaded Fuel Proposed Finding 19 years past its submission.] I recognize that industry backlash certainly contributes to this delay, such as opposition by the FAA to Santa Clara County's 2021 ban on refueling with leaded avgas at the Reid-Hillview Airport: the first restriction of its kind in the United States.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0001

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Environmental Protection Agency (US EPA) Action History & Additional Resources

EPA's Data and Analysis of Piston-engine Aircraft Emissions of Lead at U.S. Airports (html) | Environmental Protection Agency (US EPA). Related documents 2020 thru 2010.

Advance Notice of Proposed Rulemaking and Related Materials on Lead Emissions From Piston-Engine Aircraft Using Leaded Aviation Gasoline (html) | Environmental Protection Agency (US EPA). Related documents 2007 thru 2015.

Lead (Pb) Air Pollution (html) | Environmental Protection Agency (US EPA).

16 organizations and 146 individual signatories from across the US sent urgent email 05-23-2022 (pdf) to EPA Michael Regan in support of both an "Endangerment Finding" for leaded aviation gasoline (Avgas) AKA 100LL Leaded Aviation Fuel, as well as a complete ban on Avgas AKA 100LL Leaded Aviation Fuel. The request asked the EPA to expedite the elimination of 100LL Leaded Aviation Fuel AKA Avgas at the earliest possible opportunity to protect vulnerable populations from continued harm.

Comment submitted by Earthjustice et al (html) 03-18-2022 (pdf) 03-16-2022. It is long past time to finally end Tetraethyl Lead (TEL) exposure to prevent the irreversible harms it causes. These comments are submitted by 126 groups and 53 individuals on EPA's Draft Lead Strategy. 23,771 members of the public submitted personalized comments. EPA has a major opportunity to transform federal environmental protections from lead exposure as a result of statutory deadlines, court orders, settlement agreements, and voluntary commitments that require it to adopt numerous rules related to Tetraethyl Lead (TEL) over the next several years. In accord with this Administration's environmental justice commitments, EPA should commit to specific and swift revisions to existing policies, considering cumulative exposures to Tetraethyl Lead (TEL) across all routes and pathways. Earth Justice made the final set of comments submitted to EPA available (pdf). SEE: Groups Ask EPA to Regulate Tetraethyl Lead (TEL) Pollution Around Nation's Airports (html) 08-24-2022.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0017

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: What? Transitioning to Unleaded Aviation Fuels is Going to Take How Long? At least Eight (8) More Years until 2030 or sooner, right? Same Stuff, Different Decade]

In 2012, Friends of the Earth (FOE) (html) (html) and Earthjustice filed a lawsuit against the EPA, challenging the agency's failure to respond to a 2006 petition from Friends of the Earth asking for the regulation of lead emissions from general aviation aircraft under the Clean Air Act. In 2014, the same groups, along with Oregon Aviation Watch (OAW), a public advocacy group based in Hillsboro, petitioned the EPA to make an immediate endangerment finding. The agency denied the petition. The same tune is played over and over again, que Special Interest & Industry Lobbyist Group General Aviation Tetraethyl Lead (TEL) Cartel (GATELC) Ominous Identical Dueling Banjo Theme Song:

-Lawsuit Against EPA On Aircraft Lead Emissions Fails To Consider Actions Already Underway (html) 03-09-2012 - General Aviation Manufacturers Association (GAMA).

-Lawsuit Against EPA on Aircraft Emissions Fails to Consider Actions Already Underway (html) 03-09-2012 | NBAA - National Business Aviation Association.

To recap IDENTICAL ‘collaborative’ main points and progress stated in 2012:

- unreasonably delayed response
- assess and minimize the impact of leaded avgas
- stringent air quality standards for lead [necessary but not sufficient alone to protect from TEL]
- need to collect more information
- FAA, not the EPA, has final regulatory authority over all changes in aviation fuel due to critical safety of flight considerations
- EPA must consult with the FAA and cannot establish standards that would adversely affect safety
- FAA would have responsibility for implementation and would have to explore the establishment of new fuel specifications
- represent a [bold: reasonable approach] to a multi-faceted problem
- near-term availability of leaded aviation fuel is not [bold: threatened] in [bold: any] way
- safety of flight as our foremost consideration [“Sky is Falling” defense re AKA mis-fueling]

Fast Forward to EPA’s October 2022 Proposed Endangerment Finding Special Interest & Industry Lobbyist SME Comments

EPA’s Proposed Endangerment Finding: What It Means for GA’s Use of Leaded Avgas Now and in the Future (html) 10-07-2022| Experimental Aircraft Association (EAA).

Comment Number: EPA-HQ-OAR-2022-0389-0238-0005

Commenter Type: Local Government

Commenter:

Organization: County of Santa Clara, et al.

Excerpt Text:

BACKGROUND

The instant rulemaking proceeding has been decades in the making. The environmental advocacy organization Friends of the Earth first formally petitioned the EPA to make an endangerment finding for leaded avgas under section 231(a)(2)(A) of the Clean Air Act in 2006, following an initial request in 2003.[Footnote 1: Friends of the Earth, Pet. for Rulemaking & Collateral Relief (Oct. 3, 2006), <https://www.epa.gov/sites/production/files/2016-09/documents/foe-20060929.pdf>.] The EPA issued an Advance Notice of Proposed Rulemaking in 2010 describing and requesting comment on information to inform a subsequent endangerment finding proposal.[Footnote 2: U.S. EPA, Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline, 75 Fed. Reg. 22440 (Apr. 28, 2010).] In this Notice, the EPA estimated that “up to 16 million people reside and three million children attend school in close proximity to airport facilities servicing piston-engine aircraft that are operating on leaded avgas” and acknowledged its “concern[s] about the potential for health and welfare effects from exposure to lead emission from aircraft engines using gas.”[Footnote 3: Id. at 22442] Nevertheless, the EPA did not formally respond to the 2006 petition until 2012, after Friends of the Earth filed a lawsuit challenging the EPA’s unreasonable delay.[Footnote 4: See Letter and Memorandum from Gina McCarthy, Assistant Administrator, EPA, to Deborah Behles & Helen Kang, Env’t L. & Just. Clinic; & Marianna Engelman Lado et al., Earthjustice (July 18, 2012), <https://19january2021snapshot.epa.gov/sites/static/files/2016-09/documents/ltr-response-av-ld-petition.pdf>.] In 2015, the EPA announced its plans to issue a proposed endangerment finding for public comment in 2017 and a final endangerment finding in 2018.[Footnote 5: Letter from Gina McCarthy,

Administrator, EPA, to Deborah Behles, Env't L. & Just. Clinic; & Marianna Engelman Lado, Earthjustice (Jan. 23, 2015), <https://www.epa.gov/sites/default/files/2016-09/documents/ltr-response-av-ld-foe-psr-oaw-2015-1-23.pdf>.] These deadlines came and went.

In fall 2021, two of the undersigned governmental organizations – the County of Santa Clara, California and the Town of Middleton, Wisconsin – joined a nationwide coalition in petitioning the EPA to follow through on its commitments to make an endangerment finding for leaded avgas.[Footnote 6: Alaska Cmty. Action on Toxics et al., Pet. for Rulemaking (Aug. 24, 2021) (updated Oct. 12, 2021), <https://www.epa.gov/system/files/documents/2022-01/aviation-leaded-avgas-petition-exhibits-final-2021-10-12.pdf>.] On January 12, 2022, the EPA wrote to petitioners to inform them that it intended to issue a proposed endangerment finding in 2022, followed by a final endangerment finding in 2023.[Footnote 7: Letter and Memorandum from Michael Regan, Administrator, EPA to Jonathan Smith, Earthjustice; Michael Lawton, Boardman & Clark; Deborah Sivas et al., Env't L. Clinic; James Williams & Jerett Yan, Cty. of Santa Clara (Jan. 12, 2022), <https://www.epa.gov/system/files/documents/2022-01/ltr-response-aircraft-lead-petitions-aug-oct-2022-01-12.pdf>.] In March 2022, the County, the Town of Middleton, and seven of the undersigned agencies filed a letter urging the EPA to act swiftly on this rulemaking and documenting the investment of local governmental agencies in expeditious national phaseout of leaded avgas.[Footnote 8: Letter of Support for Pet. for Rulemaking from Bay Area Air Quality Mgmt. Dist., City and Cty. of San Francisco, Cal., City of Oakland, Cal., City of Santa Monica, Cal., Cty. of Santa Clara, Cal., Dane Cty. Towns Ass'n, Wis., & Town of Middleton, Wis. to Michael Regan, Administrator, EPA (Mar. 21, 2022), available at <https://www.sfcityattorney.org/wp-content/uploads/2022/03/2022-03-21-Section-231-Rulemaking-Public-Agency-Letter-of-Support.pdf>.]

Comment Number: EPA-HQ-OAR-2022-0389-0245-0024

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

EPA Must Adhere to its Timeline for Finalizing the Proposed Endangerment Finding to Swiftly Address the Serious Public Health Environmental Justice Harms Posed by Avgas.

Given the myriad public health and environmental justice harms associated with lead exposure from avgas, EPA must not delay the publication of a final, affirmative endangerment determination. The agency has already committed to releasing a final endangerment determination in 2023. Specifically, in January 2022, after decades of advocacy by non-governmental organizations,[Footnote 52: In 2006, 2014, and 2021, a coalition non-governmental organizations (NGOs) and community groups submitted petitions for rulemaking to address lead emissions from avgas. EPA denied the 2006 and 2014 petitions because the agency lacked sufficient factual information (i.e., robust air monitoring data, emissions modeling, and demographic data) to assess whether leaded avgas emissions meet the endangerment criteria under section 231 (a)(2)(A) of the Clean Air Act. EPA responded to the 2021 petition in a January 2022 stating the agency's intention to issue a proposed finding in 2022.] EPA announced that it would evaluate whether avgas meets the criteria for making an endangerment determination and “issue a proposal for public review and comment in 2022 and take final action in 2023.”[Footnote 53: EPA (2022), EPA to Evaluate Whether Lead Emissions from Piston-Engine Aircraft Endanger Human Health and Welfare, <https://www.epa.gov/newsreleases/epa-evaluate-whether-lead-emissions-piston-engine-aircraft-endanger-human-health-and->] EPA must follow through on this public commitment in order to head off potential health and environmental harms to communities in proximity to lead-polluting airports.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

Petitioner Friends of the Earth (“FoE”) is a tax-exempt environmental advocacy organization founded in 1969 and incorporated in the District of Columbia, with offices there and in Berkeley, California and staff located around the country. As of August 2021, FoE had more than 225,000 members across all fifty states in the United States and more than 5 million activists. FoE is part of Friends of the Earth International, a federation of grassroots groups working in seventy-three countries on today’s most urgent environmental and social issues. FoE’s mission is to defend the environment and champion a healthy and just world, including by working to reduce air and water pollution throughout the United States. To achieve these goals, FoE actively engages in rulemaking efforts before EPA and other regulatory agencies relating to the regulation of industrial sources of air and water pollution and in related litigation.

For nearly twenty years, FoE has advocated for federal action to address lead emissions from the use of leaded avgas. At nearly every turn, EPA has responded to FoE’s calls for action with delay or excuses for EPA’s inaction. In 2003, FoE—through its division Bluewater Network—first requested that EPA make an endangerment finding for leaded avgas. EPA responded in 2005, claiming “we do not believe we currently have sufficient information that would enable us to make a determination whether aircraft lead emissions may reasonably be anticipated to endanger public health and welfare.” [Footnote 7: EPA, EPA420-R-05-004, Emission Standards and Test Procedures for Aircraft and Aircraft Engines 43 (Nov. 2005), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P10023C0.PDF?Dockey=P10023C0.PDF>.] The following year, FoE formally petitioned EPA to make a finding under section 231(a)(2)(A) of the Clean Air Act (“CAA”), 42 U.S.C. (Section) 7571, that leaded avgas harms human health or the environment and to regulate such emissions from general aviation aircraft. [Footnote 8: Petition for Rulemaking & Collateral Relief from Friends of the Earth, to EPA (Oct. 3, 2006), <https://www.epa.gov/sites/production/files/2016-09/documents/foe-20060929.pdf>.] In 2007, EPA requested comment on the issues raised in the 2006 petition, and in 2010, EPA issued an Advance Notice of Proposed Rulemaking (“ANPR”) on the issue, in which it acknowledged that there is no identifiable safe level of lead exposure and that lead emitted from piston-engine aircraft operating on leaded avgas constituted about half of domestic lead emissions. [footnote 9: Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline, 75 Fed. Reg. 22,440, 22,442 (proposed Apr. 28, 2010).]

Despite issuing this ANPR, however, EPA did not formally respond to FoE’s 2006 petition, so FoE filed suit over EPA’s unreasonable delay. Only then did EPA formally respond to FoE’s petition, now claiming that it needed more time to gather information to determine whether emissions of leaded avgas cause or contribute to harmful air pollution. [Footnote 10: Letter and Memorandum from Gina McCarthy, Assistant Adm’r, EPA, to Deborah Behles & Helen Kang, Env’t L. & Just. Clinic, & Marianna Engelman Lado & Timothy Ballo, Earthjustice (July 18, 2012), <https://19january2021snapshot.epa.gov/sites/static/files/2016-09/documents/ltr-response-av-ld-petition.pdf> (responding to Pet. for Rulemaking & Collateral Relief).] In 2014, FoE, along with Physicians for Social Responsibility and OAW, petitioned EPA to reconsider its decision not to make an endangerment finding, pointing out the ample evidence that had already been published confirming that leaded avgas emissions contribute to air pollution that endangers human health or welfare. [Footnote 11: Petition for Reconsideration of EPA’s Denial, from Friends of the Earth, to EPA (Apr. 21, 2014).] In its response to the petition for reconsideration, EPA stated that it planned to issue a proposed endangerment finding for public comment in 2017 and a final endangerment finding in 2018. [Footnote 12: Letter from Gina McCarthy, Administrator, EPA, to Deborah Behles, Env’t L. & Just. Clinic, & Marianna Engelman Lado, Earthjustice (Jan. 23, 2015), <https://www.epa.gov/sites/default/files/2016-09/documents/ltr-response-av-ld-foe-psr-oaw-2015-1-23.pdf> (responding to Pet. for Reconsideration).] Once again, EPA

delayed, and it took yet another petition for EPA to even propose action to begin the process of addressing the use of leaded avgas.

In August and October of 2021, Petitioners and other entities once again petitioned EPA to make an endangerment finding under section 231 of the CAA that the use of leaded avgas—the largest source of airborne lead emissions in the United States—contributes to air pollution that may reasonably be anticipated to endanger public health and welfare (“2021 Petition”).[Footnote 13: Petition for Endangerment Finding from Earthjustice on behalf of Alaska Cmty. Action on Toxics, to EPA (Oct. 12, 2021), <https://www.epa.gov/system/files/documents/2022-01/aviation-lead-avgas-petition-exhibits-final-2021-10-12.pdf>.] In January of 2022, EPA responded favorably to the 2021 Petition, stating that it “plan[ned] to issue a proposed endangerment finding in 2022,” [Footnote 14: Letter from Michael S. Regan, Adm’r, EPA, to Jonathan J. Smith, Earthjustice (Jan. 12, 2022), <https://www.epa.gov/system/files/documents/2022-01/ltr-response-aircraft-lead-petitions-aug-oct-2022-01-12.pdf>.] and on October 17, 2022, EPA’s Proposed Endangerment Finding was published in the Federal Register. [Footnote 15: See 87 Fed. Reg. at 62,753. In its final endangerment finding, EPA should make clear that the record for all prior dockets relating to leaded avgas—including docket number EPA-HQ-OAR-2007-0294, and any other dockets pertaining to this matter—are incorporated into the instant administrative record, as these are materials the agency directly or indirectly relied on.]

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0001

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

In 2021 community groups from across the country, many of whom we have heard from today or will be hearing from later and represented by Earthjustice filed a petition calling on the Environmental Protection Agency to take the necessary steps to regulate lead pollution from aircrafts, the leading source of lead emission in the country. This was the third time the group has petitioned the EPA to ban leaded aviation gasoline, the first spanning back to 2006, and since then communities living near airports across the country have continued to be poisoned by lead raining down from the air.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-030-0001

Commenter Type: Advocacy Organization

Commenter: Marcie Keever

Organization: Friends of the Earth

Excerpt Text:

My name is Marcie Keever. I am a Program Director at Friends of the Earth. Friends of the Earth is an environmental organization founded in 1969 with a mission to fight for a more healthy and just world. Aside our more than four million members and activists, Friends of the Earth has been advocating for this proposed endangerment finding for leaded AVGAS for close to 20 years.

In late 2003 Friend of the Earth wrote a letter to the U.S. EPA after reviewing emissions standards for NOx with commercial aircraft. We commented on those standards as well as the lack of regulation of lead emissions from general aviation and requested that the EPA make an endangerment finding. That was in 2003. Two years later EPA responded to the request for an endangerment finding stating there wasn't sufficient information to enable the Agency to determine that aircraft lead emissions endangered public health and welfare.

In 2006 Friends of the Earth filed our first administrative petition again requesting the EPA make an endangerment finding. EPA did not respond to the petition until 2012. In response to our litigation citing an unreasonable delay, EPA responded to the petition then saying they needed until 2015 to determine whether lead emissions from aircraft endangered human health.

In 2014 Friends of the Earth joined by additional groups again petitioned EPA to regulate emissions from aircraft and EPA again partially denied the petition in 2015, this time it said it needed even more time until 2018 to issue a final determination about whether lead emission from aircraft pose a danger to human health, and of course that date came and went.

In 2021 Friends of the Earth along with a larger group of advocates including several who have testified today filed a third petition demanding EPA regulate the lead emissions from aircraft. We are here today to thank the EPA for moving forward with this endangerment finding especially the staff at the Office of Air and Radiation that have worked for so long and to support the proposed endangerment finding and urge the EPA to move with as much speed as possible with the rule making like this one to finalize this endangerment finding and move towards a regulation and finally get the lead out of piston-engine aircraft

Response to Comments on the History of Petitions Regarding Lead Emissions from Aircraft and the EPA Responses

Several commenters submitted comments regarding the history of petitions relating to lead emissions from aircraft, as well as the EPA's responses to those petitions. In response to these comments, the EPA notes that it briefly summarized these petitions and the EPA's responses in the proposal for this action⁶ to provide historical context for this action. In providing this background information in the proposal and the response here, the Agency is not reopening or reconsidering those prior responses. The EPA further notes that it has actively engaged in the investigation of emissions of lead from aircraft engines operating on leaded fuel and the impact of these emissions on lead air pollution, and that this investigation has informed this action. In this action, as described in Sections IV and V of the final notice for this action, the Administrator is making two findings: 1) that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act, and 2) that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act. In issuing these final findings, the EPA becomes subject to a duty under CAA section 231 to propose and promulgate emission standards applicable to emissions of lead from covered aircraft engines, as described in Section III.C of the final notice for this action.

As part of its comments on the history of these petitions, one comment characterized a document submitted in 2014 as petitioning the EPA to reconsider its decision not to make an endangerment finding. To the extent that this comment suggests that the EPA's 2012 response to the 2006 petition mentioned in the comment denied a request in that petition to evaluate endangerment or made a negative endangerment finding, the Agency disagrees. Rather, the 2012 response explained that the EPA was not at that time issuing a judgment on whether lead emissions from general aviation aircraft piston engines cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, but it also described the Agency's plan for collecting the necessary information and conducting a proceeding under CAA section 231 regarding whether such lead emissions cause or contribute to such air pollution.⁷

⁶ See 87 FR 62753, 62772 (Oct. 17, 2022).

⁷ The EPA's 2012 response is available at <https://www.epa.gov/sites/default/files/2016-09/documents/ltr-response-av-ld-petition.pdf>

One commenter asserts that the agency failed to recognize lead pollution in the “nonroad” subsection of 2015 EPA Regulations for Emissions from Vehicles and Engines, and as a citation the comment provides a link to the 2015 proposal for the endangerment and cause or contribute findings under CAA section 231 for greenhouse gases that were issued in final 2016 findings. 81 FR 54421 (August 15, 2016). The EPA responds that this 2015 proposal, and the final 2016 findings, are beyond the scope of this action, as the Agency neither proposed, requested comment on, nor is finalizing any action with respect to those previously issued findings for greenhouse gases.

In this section of the RTC, the EPA is focusing on comments related to the history of petitions relating to lead emissions from aircraft. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, we respond to comments related to environmental justice in Section 3 of the RTC and we respond to comments related children’s health and their potential exposures near airports where covered aircraft operate in Section 4. Comments regarding the endangerment finding are addressed in Section 5, comments regarding the cause or contribute finding are addressed in Section 6, and comments regarding regulation of lead from aircraft are addressed in Section 7.

Section 8.2. Comments Requesting Other EPA Actions

Section 8.2.1. Comments on the Lead NAAQS and Lead Monitoring

Comment Number: EPA-HQ-OAR-2022-0389-0233-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)

Excerpt Text:

The rule is strongly supported by decades of scientific studies, past policy outcomes associated with decreased lead burden in populations, and the Biden administration's final lead strategy (CFR, 2022). The draft published analysis for this proposed rule was developed from a variety of connected studies and technical methodologies that follow the classic source to exposure to health effect continuum (Teegarden JG, et al. 2016).

This comprehensive analysis by EPA documents a case for public health endangerment based on the potential for NAAQS violations near general aviation airports. The lead NAAQS is a level of airborne lead that is set to be protective against a 2-point IQ loss. EPA’s analysis certainly provides strong evidence that airborne lead levels are not protective of the lead NAAQS IQ decrement, but we would like to make clear that since there has been no safe exposure level of lead found, this analysis albeit thorough, analytically sound, and well documented is not based on fully health protective assumptions.

Moreover, the lead NAAQS are not a good measure of whether leaded avgas endangers public health since the standard is quite outdated (last updated in 2008) and is not health protective, permitting significant IQ loss. EPA missed its October 2021 deadline for reviewing and revising the lead NAAQS. Even if areas around an airport are compliant with the lead NAAQS, public health and particularly children’s health could still be endangered. That said, the fact that the lead NAAQS are potentially exceeded shows how great a public concern leaded avgas is.

Monitoring studies of general aviation airports resulted in two demonstrated exceedances of the NAAQS using particulate monitoring. The monitoring studies employed a filter-based particulate capture methodology, which therefore does not capture gas-phase organically substituted lead. As a result,

potential exceedances of the lead NAAQS are likely to be occurring at more than the reported number of small airports tested.

Lead from piston-engine aircraft is emitted in both gas and particle phase, and so health protective monitoring would include both gas phase and particle collection methods, and air dispersion modeling would need to be set up such that deposition algorithms as well as gas phase transport was appropriately parameterized. Therefore, potential NAAQS violations at small airports is well supported based on the particulate-based ambient air monitoring since this method did not capture all potential lead species.

Due to the underpredictions of potential NAAQS violations at small airports demonstrated by ambient air monitoring, EPA set up an air dispersion modeling study of 13,000 airports. Modeled predictions of lead concentrations, annual averages, and 3-month rolling averages for lead NAAQS compliance demonstration were estimated based on a sensitivity analysis. Locations and activity levels were varied to test potential concentration and location maxima.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0006

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[**Bold: Negative Health Outcomes at Levels 10 times Lower than Tragically Outdated Current US Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS)**]

It's generally well known since 2021 that observed associations between exposure to airborne lead concentrations and poor behavioral outcomes occur at extremely low concentrations, in fact [**bold: 10 times lower**] than the National Ambient Air Quality Standards (NAAQS) set by the US Environmental Protection Agency (EPA). The increased vulnerability to ambient airborne lead exposure and behavioral problems in 12-year-old youth whose exposure to airborne lead [**bold: NEVER**] exceeded the United States Environmental Protection Agency (EPA) standard. SEE: Identifying sensitive windows of airborne lead exposure associated with behavioral outcomes at age 12 (html) April 2021 | Environmental Epidemiology.

-The Clean Air Scientific Advisory Committee (CASAC) as part of the 2021 CASAC Lead Review Panel (html) | Advisory Reports (html) | United States Environmental Protection Agency (US EPA).

-Integrated Review Plan for Lead NAAQS Review - Integrated Science Assessment (html) | Clean Air Scientific Advisory Committee (CASAC) | United States Environmental Protection Agency (US EPA). Additional information regarding IRP and final Consultative report.

Based on the: Integrated Review Plan (IRP) for the National Ambient Air Quality Standards for Lead. Volume 2: Planning for the Review and the Integrated Science Assessment (pdf), EPA-452/R-22-003b, March 2022, described in Federal Register :: Release of Volumes 1 and 2 of the Integrated Review Plan (IRP) for the Lead National Ambient Air Quality Standards (html) (pdf), the Clean Air Scientific Advisory Committee (CASAC) released their findings & consultative report EPA-CASAC-22-003, "Consultation on the EPA's Integrated Review Plan for the National Ambient Air Quality Standards for Lead. Volume 2: Planning for the Review and the Integrated Science Assessment" (pdf) 04-22-2022, along with EPA Agency Response to EPA-CASAC-22-003 (pdf) 06-10-2022.

As part of the 2021 CASAC Lead Review Panel (html) Dr. Bruce Lanphear, M.D., M.P.H., Professor at Simon Fraser University and Investigator at BC Children's Research Institute in Vancouver, British Columbia, is a board-certified physician in public health and preventive medicine [SEE page A-25 of findings & consultative report (pdf) EPA-CASAC-22-003] comments:

-If airborne lead monitors around Michigan airports [448!] did not exceed the primary lead standard, it indicates that the current primary lead standard fails to protect the public, including a vulnerable subpopulation [> 1 million Michigan children!].

-If the air monitors surrounding the Reid-Hillview airport did not consistently exceed the existing primary lead standard, it indicates that the existing standard fails to protect children from lead toxicity.

-NOTE: New evidence on the size of lead particles in exhaust from automobile emissions and aircraft emissions – which are much smaller than TSP and may be transported directly to the brain via the olfactory nerve – indicate that Pb-TSP is unlikely to be an adequate indicator of lead exposure. Moreover, up to 20% of lead in aircraft emissions is in the vapor phase (also known as alkyl or organic lead) that can be readily inhaled or dermally absorbed (page 2-10, US EPA. 2013 Final report: Integrated Science Assessment for Lead (pdf) 1886 pgs. US Environmental Protection Agency, Washington, DC, EPA/600/R-10/075F. June, 2013, Contains Errata Sheet created 5/12/2014.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0001

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

The EPA’s proposed Endangerment Finding for Leaded Aviation Gas is necessary to protect that small [Italics: “percentile”] of children that are not protected by the [Italics: National Ambient Air Quality Standard (NAAQS)] for lead.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0006

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Because the present NAAQS for lead does not protect children living near airports that use leaded fuel, the elimination of leaded fuel is our only hope that will protect those children. An [Italics: Endangerment Finding for Leaded Aviation Fuel] is long overdue.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0010

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

Concerning lead particulate inhalation, we in the U.S. have a National Ambient Air Quality Standard (NAAQS) for lead through the EPA that presently is 0.15 micrograms of Pb in total suspended particles per cubic meter of air as a 3-month average. See:

<https://www.epa.gov/lead-air-pollution/national-ambient-air-quality-standards-naaqs-lead-pb>.

This standard, especially given the very generous (to polluters) 3-month averaging, is probably not at all protective of human health and is perhaps at the basis of the apparent complete disconnect between how EPA and state environmental regulatory agencies, e.g., Michigan Department of Environment, Great Lakes and Energy (EGLE), have been able to pretty much overlook piston-engine aircraft sources of lead

particulate emission exposures no matter what the public health data may indicate. This disconnect needs to be addressed by EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0500-0004

Commenter Type: Private Citizen

Commenter: Carla Campbell

Organization:

Excerpt Text:

I would also request that you re-evaluate the lead standard of the Clean Air Act, as that may need to be lowered further to protect public health.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0005

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

In 2008 the [Italics: National Ambient Air Quality Standard (NAAQS)] for lead was lowered ten-fold to 0.15 ug/m³. This reduction was based, in part, on the Clean Air Scientific Advisory Committee's (CASAC) recommendation that "...an IQ loss of 1-2 points should be [Bold: 'prevented in all but a small percentile of the population'] [Footnote 8: Federal Register, Volume 73 Issue 219 (11-12-2008) Page 67000 <https://www.govinfo.gov/content/pkg/FR-2008-11-12/html/E8-25654.htm>]. Studies now show that the [Italics: "small percentile of the population"] includes children (and likely fetuses) that reside within 1.5 miles of airports where leaded fuel is used.

In 2016, after another NAAQS review, the EPA's final rule kept the [Italics: NAAQS] for lead at the same level of 0.15 ug/m³. In the 2016 final rule the EPA cited CASAC's conclusions of 2008 and included the statement: [Italics: "During the 2008 review, CASAC commented regarding the significance from a public health perspective of a 1–2 point IQ loss in the entire population of children and, along with some commenters, emphasized that the NAAQS should prevent air-related IQ loss of a significant magnitude, such as on the order of 1–2 IQ points,] [Bold: in all but a small percentile of the population."'] [Footnote 9: Federal Register /Vol. 81, No. 201 /Tuesday, October 18, 2016 /Rules and Regulations 71917]. This again suggests that not all children are protected by the [Italics: NAAQS] for lead.

Comment Number: EPA-HQ-OAR-2022_0389-0324-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

For children/ pregnant women exposed to high levels of lead, it can cause developmental delays in babies and children as well as neurological changes due to lead being able to cross the placental barrier. Exposure to lead can also lead to anemia, weakness, and can even cause kidney and brain damage. According to the World Health Organization, there is no safe level of exposure to lead, demonstrating how important it is for the EPA to restrict and monitor the amount of lead emissions being released in the air.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-012-0001

Commenter Type: Academia

Commenter: Bruce Lanphear

Organization: Simon Fraser University, on behalf of the County of Santa Clara

Excerpt Text:

I am a physician and a scientist and over the past 25 years have studied how children are poisoned by lead in paint, air, house dust and water. I have also studied how lead damages children and adults. I have been fortunate to be involved in dozens of studies around the world and I was the consultant on the Reid-Hillview Airport study. Lead is a poison. We have known that for over two centuries. Most of my research over the past 25 years was to find out how much lead is too much. All 12 studies that examined the shape of the dose response relationship per lead including one that measured lead and bone found steeper detriments in IQ scores or academic abilities at the lowest level of lead in children's blood. We don't expect this to a degree of consistency in science but we would be foolish to ignore it. The population impacts of lead exposure on brain development including IQ deficits, diminished academic abilities and elevations in ADHD are lifelong. Even when IQ deficits are subtle for an individual child, they aren't trivial and the population impact is substantial. Aaron Rubin and his team found that children with higher blood lead concentrations were less likely to obtain the same social standing as their parents. Sheryl Magzamen found in a study in Milwaukee school children that lead exposure especially impacted children who already struggled with reading abilities. But lead doesn't only impact children, it's an established risk factor for preeclampsia and preterm birth, hypertension and coronary heart disease deaths. 15 studies conducted in Europe and the United States all found that lead was a risk factor for cardiovascular disease mortality. Using the NHANES follow-up study, we found that lead was the leading risk factor for coronary heart disease deaths in the United States accounting for 185 deaths every year. Airborne lead is an important source of lead exposure in the United States. A study by EPA scientists found that children's blood lead concentrations rose sharply at airborne lead concentrations below .15 microgram per cubic meter, the current air standard, and then decelerated at higher concentrations.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

Lead has been detected in the air and soil around Merrill Field in Anchorage, Alaska. Data collected from an air quality station near one of the runways between 2011-2012 showed that lead levels ranged from 0.001 to about 0.115 parts per billion (ppb) on any given day depending on the number of flights on the runway (EPA, 2015). This is far from a comprehensive assessment and additional monitoring is necessary here as well as at airports throughout the state.

Comment Number: EPA-HQ-OAR-2022-0389-0224-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: New Jersey Progressive Equitable Energy Coalition (NJPEEC)

Excerpt Text:

NJPEEC supports the Environmental Protection Agency's ("EPA's") Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare (hereinafter "Endangerment

Finding”). [Footnote 2: Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, 87 Fed. Reg. 62,753 (Oct. 17, 2022) (to be codified at 40 C.F.R. Parts 87, 1031, and 1068), <https://www.govinfo.gov/content/pkg/FR-2022-10-17/pdf/2022-22223.pdf>.] However, NJPEEC seeks to bring to EPA’s attention the specific impact that lead has on New Jersey’s Overburdened Communities (“OBCs”) and to encourage EPA to prioritize these communities in future actions.[Footnote 3: N.J.S.A. 13:1D-158(2).] OBCs are defined under New Jersey’s 2020 Environmental Justice Law (“EJ Law”) as the following:

[A]ny census block group, as determined in accordance with the most recent United States Census, in which (1) at least 35 percent of the households qualify as low- income households; (2) at least 40 percent of the residents identify as minority or as members of a State recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency. [Footnote 4: Id.]

Specifically, NJPEEC Chairman Marcus Sibley and the coalition’s steering committee of dedicated NJ climate and justice leaders, including Maria Santiago-Valentin, urge EPA to (1) prioritize Environmental Justice Communities, like New Jersey’s OBCs, in its potential future actions on lead air emissions from piston-engine aircraft consistent with EPA’s FY 2022–2026 Strategic Plan (“EPA Strategic Plan” or “EPA 2022–2026 Strategic Plan”),[Footnote 5: See FY 2022-2026 EPA Strategic Plan, U.S. Env’t Prot. Agency (Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.] and (2) to ensure ongoing air monitoring in all communities surrounding airports that service piston-engine aircrafts to prove that lead air emissions are decreasing in OBCs. New Jersey’s OBCs and Environmental Justice Communities have been subject to disproportionate lead pollution from leaded aviation fuel, lead service lines bringing contaminated water into their homes, lead paint, and tainted soils. If EPA prioritizes disproportionately impacted communities when it creates and implements new lead air emissions standards, and if EPA can ensure that lead air pollution has decreased in OBCs through increased air monitoring, that would lead to more equitable enforcement of future air emissions standards, and environmental and public health benefits in OBCs and Environmental Justice Communities.

First, we wish to inform EPA about how OBCs are impacted by overall lead exposure in New Jersey. Here, OBCs are not only exposed to lead from the air, but from drinking water sources and homes as well. To protect OBCs, EPA should consider the cumulative impacts from multiple sources of lead exposure that OBCs and families face. One stark example is the Newark Lead Crisis.[Footnote 6: See Eric Davis, Cleaning the New Jersey Commute: Electrifying Transport as a Step Toward Environmental Justice, ClimateXChange (Apr. 15, 2021), <https://climate-xchange.org/2021/04/15/cleaning-the-new-jersey-commute-electrifying-transport-as-a-step-toward-environmental-justice/>.] Newark “is home to majority immigrant, Latinx, and Black residents, which has made it especially vulnerable to [environmental and public health] risks and hazards.”[Footnote 7: Id.] Because of its demographic makeup and the environmental and public health stressors experienced by Newark residents, every single block group in the City is classified as an OBC and faces disproportionate impacts of air, water, and soil pollution compared to the rest of the state.[Footnote 8: Environmental Justice Mapping, Assessment and Protection Tool (EJMAP), N.J. Dep’t Env’t Prot., <https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6> (last visited Jan. 10, 2023).] Tests conducted in 2017 revealed that over 10% of Newark homes had concentrations of lead in drinking water that were over two times the levels deemed safe by federal law.[Footnote 9: Eric Davis, Cleaning the New Jersey Commute: Electrifying Transport as a Step Toward Environmental Justice, ClimateXChange (Apr. 15, 2021), <https://climate-xchange.org/2021/04/15/cleaning-the-new-jersey-commute-electrifying-transport-as-a-step-toward-environmental-justice/>.] The Newark Lead Crisis was also the subject of a June 2019 lawsuit filed by the Natural Resource Defense Council (“NRDC”).[Footnote 10: Id.] However, as of August 2021, the almost 23,000 lead service lines feeding drinking water to Newark homes have been replaced by copper pipes. [Footnote 11: Kevin Armstrong, ‘Hallelujah Moment’: How this City Overcame its Lead Crisis, New York Times (Aug. 11, 2021),

<https://www.nytimes.com/2021/08/11/nyregion/newark-lead-pipes-drinking-water.html>.] While many of Newark’s lead service lines have been replaced, residents are still subject to pollution from the Newark Liberty International Airport. EPA has the opportunity to directly address and improve this source of lead pollution in OBCs like Newark and those around New Jersey that are adjacent to airports and other facilities servicing piston-engine aircrafts.

In addition to having a disproportionate impact on OBCs in New Jersey and Environmental Justice Communities around the U.S., lead poisoning has severe impacts on children—especially children in OBCs. On July 28, 2022, the Subcommittee on Environment of the Committee on Oversight and Reform within the U.S. House of Representatives (the “Committee”) held a session titled “Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children.”[Footnote 12: See Toxic Air: How Leaded Aviation Fuel is Poisoning America’s Children, U.S. House of Representatives Transcript (July 28, 2022), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf>.] In the opening statement, the Chair of the Committee stated that “lead from the exhaust fumes of private planes or flight schools near [children’s] homes . . . [d]amages every organ and slowly severs neural connections,” leading to “seizures, learning disabilities, and low IQ.”[Footnote 13: Id. at 2.] The Chair added that “[l]ead exposure can predict differences in a child’s future income, health, and educational attainment.”[Footnote 14: Id.] However, not all people and communities experience the same amount of lead exposure—systemic environmental racism has caused more widespread impacts of lead pollution on families and children in OBCs and Environmental Justice Communities.

In 2020, the Centers for Disease Control and Prevention (“CDC”) found that most of the 2.6 million U.S. families at risk of lead poisoning are Black families.[Footnote 15: Eleesha Lockett, How Lead Poisoning Disproportionately Affects Black Communities, healthline (Feb. 7, 2022) <https://www.healthline.com/health/lead-poisoning-black-communities>.] The disproportionate impact of lead pollution on Black families and Environmental Justice Communities is fueled by institutionalized redlining[Footnote 16: Id. (“With the creation of [the Federal Housing Administration’s ‘Underwriting Handbook’] rating system for neighborhoods came the term ‘redlining,’ in which mortgage appraisers sectioned off the ‘least desirable’ neighborhoods on the map with a red line. In turn, lenders would not approve mortgages in these ‘red’ areas — thus creating a disparity that led to the rapid decline of inner city neighborhoods. As a result of this form of institutionalized racism, thousands of Black communities around the United States became disproportionately affected by the negative impact of environmental racism.”).] and environmental racism, which includes the disproportionate placement of polluting facilities in OBCs.[Footnote 17: Id. (“As a result of institutionalized environmental racism, communities in ‘undesirable’ neighborhoods are often exposed to environmental pollutants from places such as: [highways, landfills, waste sites, and even chemical plants]. In addition, many of the houses within these neighborhoods end ”).] The CDC also notes that children are commonly exposed to lead from paint chips, dust, soils, medications, cosmetics, consumer products, and parents who may bring lead home from working in certain industries.[Footnote 18: Id.] As a result of the overexposure Black children have to lead, the CDC determined in a 2013 report that Black children had the highest average blood lead levels at 5.6 micrograms per deciliter, which is over twice the level reported for white children—2.4 micrograms per deciliter.[Footnote 19: Id.] The 2013 study also found that “children with a blood lead level of 5 micrograms per deciliter [] or higher were at risk of serious adverse health effects.”[Footnote 20: Id. (emphasis added).] One of the many opportunities that EPA has to promote environmental justice is to regulate lead air emissions, prioritize reductions of lead air emissions in OBCs, and increase monitoring of air emissions to ensure that the most impacted communities are protected from the severe and highly consequential impacts of childhood lead exposure.

Decreasing lead emissions through EPA’s proposed Endangerment Finding would be consistent with its 2022–2026 Strategic Plan. [Footnote 21: See FY 2022–2026 EPA Strategic Plan, U.S. Env’t Prot. Agency (Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.] The Strategic Plan outlines six goals, one of which is to “Take Decisive Action to Advance

Environmental Justice and Civil Rights.” [Footnote 22: Id. at 29.] To meet this goal, EPA seeks to: (1) “Promote Environmental Justice and Civil Rights at the Federal, Tribal, State, and Local Levels”; (2) “Embed Environmental Justice and Civil Rights into EPA’s Programs, Policies, and Activities”; and (3) “Strengthen Civil Rights Enforcement in Communities with Environmental Justice Concerns.” [Footnote 23: Id. at 29, 32, 36 (describing these objectives, respectively, as objectives 2.1, 2.2, and 2.3).] While these are laudable goals, EPA must take meaningful action in support of EJ communities to actually achieve them. With this Endangerment Finding, EPA has the opportunity to adopt air emissions standards on lead that will directly benefit and promote Environmental Justice at the national, state, and local levels. To ensure that EJ Communities truly feel the benefits of EPA action on this matter, EPA must prioritize lowering lead air emissions in EJ Communities to decrease the cumulative impacts of lead on Black, Brown, Indigenous, and low-income communities in New Jersey and throughout the U.S.

Additionally, Objective 2.2 in EPA’s Strategic Plan includes “[m]aking commitments on [Italics: measurable environmental and public health improvements] in overburdened and underserved communities.” [Footnote 24: Id. at 32 (emphasis added).] EPA could attain this objective by increasing air monitoring of lead in OBCs to collect data on actual lead air emissions reductions in New Jersey’s OBCs, and Environmental Justice Communities around the country. According to EPA’s National Emissions Inventory (“NEI”), the counties in New Jersey that are most impacted by lead air emissions are Bergen, Essex, Union, and Mercer Counties. [Footnote 25: National Emissions: 2017 County Emissions, U.S. Env’t Prot. Agency, https://edap.epa.gov/public/extensions/nei_report_2017/dashboard.html#sector-db (last visited Jan. 10, 2023).] In 2017, these counties experienced the highest airborne lead levels per square mile from aircrafts—approximately 661 pounds in Bergen and Essex Counties; 220 pounds in Union County; and almost 441 pounds in Mercer County. [Footnote 26: Id.] The New Jersey Department of Environmental Protection’s (“DEP’s”) EJ mapping tool, called EJMAP, indicates that the communities surrounding major airports in New Jersey, including Newark Liberty International Airport [Footnote 27: See Newark Liberty International Airport, <https://www.newarkairport.com/> (last visited Jan. 10, 2023).] and the Trenton-Mercer Airport, [Footnote 28: See Mercer County: Trenton-Mercer Airport, N.J. Mercer Cnty., <https://www.mercercounty.org/departments/transportation-and-infrastructure/trenton-mercerairport> (last visited Jan. 10, 2023).] are both adjacent to OBCs. [Footnote 29: Environmental Justice Mapping, Assessment and Protection Tool (EJMAP), N.J. Dep’t Env’t Prot., <https://experience.arcgis.com/experience/548632a2351b41b8a0443cfc3a9f4ef6> (last visited Jan. 10, 2023).]

EPA should, in conjunction with any proposed lead emissions standards, increase oversight or overall air monitoring in OBCs located near airports. As discussed above, OBCs—and especially Black communities—experience more lead exposure and more of its associated cognitive and developmental impacts. Because of this, EPA should commit to prioritizing OBCs and Environmental Justice Communities by focusing enforcement of future air emissions standards on aircrafts utilizing leaded fuel in those communities, and by increasing air monitoring efforts. Doing so would ensure that OBCs and Environmental Justice Communities feel the benefits of any promulgated lead air emissions standards and regulations first, which should be the case since they are the most severely impacted. Additionally, increasing air monitoring efforts in these communities would provide tangible data and evidence that EPA’s efforts are materially decreasing lead levels in air emissions, and that OBCs are actually benefiting directly from EPA action. These actions would also show that EPA is taking steps toward the Environmental Justice goals outlined in its 2022–2026 Strategic Plan. [Footnote 30: See FY 2022-2026 EPA Strategic Plan, U.S. Env’t Prot. Agency (Mar. 2022), <https://www.epa.gov/system/files/documents/2022-03/fy-2022-2026-epa-strategic-plan.pdf>.]

In conclusion, NJPEEC urges EPA to prioritize and increase air emissions monitoring in OBCs and Environmental Justice Communities. OBCs, especially Black communities, experience higher rates of lead exposure from multiple sources, so EPA should focus on and create standards that are protective of these communities in future actions on lead air emissions. Communities facing the impacts of systemic

environmental racism should feel the immediate benefits when EPA takes action on pollution, and acting on lead air emissions is one way that EPA can begin to undo these historic injustices.

Comment Number: EPA-HQ-OAR-2022-0389-0168-0001

Commenter Type: Private Citizen

Commenter: María Reyes

Organization:

Excerpt Text:

The mission of the EPA is to protect our health and environment.

This has been the mission of this department since it was founded back in 1970, however, the Cassell Community is not being protected by your agency. During the last 40 years our minority community has suffered the injustice of the single piston airplanes that continue flying in and out of this airport 24/7.

On November 3, 2022, your agency announced that there would be 132 projects that would monitor the air quality in our communities. This project was allocated the sum of 53M dollars. Not one of these air monitor projects was considered for this nuisance airport.

In 2008, the EPA cited Reid Hillview Airport. In 2020 Santa Clara County finally stated what our communities already knew, yes there is lead at Reid Hillview Airport. This lead contamination is not solely found inside Reid Hillview Airport, but continue to spread into our communities through the air. The same air we all breathe.

You were appointed by President Biden under the Justice 40 initiative. This initiative contains rules and regulations, but these rules and regulations do not work unless they are applied, followed and changes are made.

Recently the EPA sponsored a hearing for public comments; once again, what good does it do if our comments continue falling on deaf ears?

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-020-0001

Commenter Type: Private Citizen

Commenter: Debi Wagner

Organization:

Excerpt Text:

I have a long history in the community living near several airports around SEA-Tac Airport which is a commercial airport but also effected by Boeing Field and other airports. I have moved three times in my life as an adult to get away from what I have been aware of as toxic exposure is happening for people living on the ground and adjacent to airports. The science and data and history of this issue has been clear to EPA for several decades. The dangers of lead, air pollution have been known by EPA for decades. I do not understand why EPA has dragged their feet on this for so long. In the meanwhile, generations of children and families have been harmed unnecessarily. This is not a lot different from commercial aviation where you have these polluters bringing the pollution directly into our homes and our neighborhoods, our schools and our playgrounds. The exposures are unnecessary. If EPA had regulated airports as sources of criteria and toxic emissions, they would not have had to rely on faulty air quality data provided by regional monitoring networks that are purposefully set up to avoid these sources. These kind of injuries and harms that have been happening over decades to people that are -- that as I said are

unnecessary has compelled the public to spend vast amounts of money for health care, scientific investigation on their own, years of life loss, working years that have been dedicated to all of these environmental activism campaigns just to get EPA and others to do their jobs.

Response to Comments Regarding the Lead NAAQS and Lead Monitoring

Comments regarding the lead NAAQS itself, such as comments regarding the level or indicator or averaging time for the standard, whether the standard adequately protects public health (including the degree of protection for children), whether studies referred to by the commenters would inform the setting of the lead NAAQS, and the timing of the review of that standard, are outside the scope of this action, as this action concerns whether to make an endangerment and cause or contribute finding under section 231 of the CAA, and does not address whether to revise or retain the lead NAAQS under section 109 of the CAA. Accordingly, these comments require no response in this action. In response to the comment stating that the lead NAAQS was last updated in 2008, we note that last review of the existing lead NAAQS was completed in 2016. In the 2016 review, the Administrator concluded that the current primary standard provided the requisite protection of public health with an adequate margin of safety, including protection of at-risk populations, and that the current secondary standard was requisite to protect public welfare from known or anticipated adverse effects, and accordingly retained both standards without revision. 81 Fed. Reg. 71906, 71907 (October 18, 2016). In response to the comment suggesting that the lead NAAQS be re-evaluated, we note for informational purposes that the lead NAAQS and the air quality criteria for lead are currently undergoing review by EPA and the Clean Air Scientific Advisory Committee through a separate process, and there will be opportunities for public comment during that process.^{8,9}

To the extent that these comments state or suggest that the lead NAAQS is not a good measure of whether leaded avgas endangers public health because in their view the standard is not adequately health protective, EPA responds as follows. First, as a point of clarification, we note that, as summarized in Section III.A of the final notice, the Administrator is making two distinct findings: the Administrator finds that *lead air pollution* may reasonably be anticipated to endanger the public health and welfare, and that *engine emissions of the lead air pollutant from covered aircraft* cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare. These comments do not clearly distinguish between these two findings. However, even assuming for the sake of argument that commenters were correct, their concerns would not provide a basis to not finalize the findings. As explained in Section III.B of the final notice, section 231 does not require the EPA to identify a precise numerical value or a minimum threshold of risk or harm before determining whether an air pollutant endangers, and by the same logic it does not require EPA to identify a specific minimum threshold of contribution from potentially subject source categories in determining whether their emissions “cause or contribute” to the endangering air pollution. Thus, to the extent that these comments are intended to criticize either finding for not being based on “fully health protective assumptions” they misunderstand the purpose of, and framework for, this action. These findings are not intended to identify health protective assumptions or levels of air pollution or air pollutants, but instead are focused on determining under CAA section 231(a)(2)(A) whether the *lead air pollution* may reasonably be anticipated to endanger the public health and welfare, and whether *engine emissions of the lead air pollutant from covered aircraft* cause or contribute to that lead air pollution. For the reasons described in Sections IV and

⁸ Documents pertaining to the current review of the NAAQS for Lead can be found here: <https://www.epa.gov/naaqs/lead-pb-air-quality-standards>.

⁹ The EPA released the ISA for Lead, External Review Draft, as part of the Agency’s current review of the science regarding health and welfare effects of lead. EPA/600/R-23/061. This draft assessment is undergoing peer review by the Clean Air Scientific Advisory Committee (CASAC) and underwent public comment, and is available at: <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=357282>.

V of the final notice, EPA is finalizing affirmative findings for both points. Nothing in these comments undermines these conclusions. For example, as noted in section V of the final notice, given that the lead NAAQS are established to protect public health and welfare, contributions to concentrations that exceed the existing lead NAAQS are of particular concern to the Administrator and add persuasive support for the conclusion that lead emissions from engines in covered aircraft cause or contribute to the endangering air pollution. Even if commenters believe that the lead NAAQS should be made more stringent, that does not provide a basis to disregard contributions to concentrations that exceed the existing NAAQS. To the extent that commenters are suggesting that the information they present provides additional support for the findings, EPA concludes that the information and data discussed in Sections IV and V provide ample support for the findings.

With respect to the comment that monitoring studies of lead near airports are not adequately measuring lead and therefore not capturing all potential exceedances of the standard, we note that as for the comments above, even if the commenter were correct, this point does not provide a basis to not finalize the proposed findings nor does it call into question the support for the cause or contribute finding provided by the monitoring information discussed in Section V of the final notice. We further note, with regard to the lead monitoring that was conducted at and near airports, as described in the final notice, when summarizing the available data regarding emissions of alkyl lead from piston-engine aircraft, the 2013 Lead ISA notes that an upper bound estimate of lead in the exhaust that might be in organic form may potentially be 20 percent.¹⁰ Organic lead present in engine exhaust of covered aircraft would be expected to influence receptors within short distances of the point of emission. The EPA currently has no data from the relevant locations at airports on which to base any conclusions regarding the contribution of organic lead to ambient air lead concentrations. However, we note that the air quality modeling conducted by the EPA includes all lead, regardless of chemical form, and those air quality modeling results agree generally well with air quality monitoring data that has been collected near airports.^{11,12} We also note that the lead monitoring data reported in Table 2 of the final notice is based on established federal reference methods for measuring ambient concentrations of airborne lead.

In response to the comments suggesting that the endangerment finding is necessary to protecting children who are not protected by the lead NAAQS, in addition to the points made earlier in this response regarding the lead NAAQS, we further note that while this action addresses the predicate for certain regulatory actions, as described in the final notice (see, e.g., Section III.A), this action does not itself establish any regulatory requirements nor does it prejudice the content or intended goals of any such future regulations. Thus, these considerations are not germane to this final action, and this comment requires no further response.

Some commenters requested or stated the need for additional monitoring of lead near airports, including in environmental justice communities, with one commenter suggesting that ensuring such ongoing monitoring in all communities surrounding airports could show that lead air emissions are decreasing in overburdened communities. One commenter asserted that the EPA did not consider an air quality monitoring project in their community among the community air quality monitoring projects announced by the EPA. Comments related to the need for additional lead monitoring are outside the scope of this action and thus require no response.

¹⁰ EPA (2013) ISA for Lead. Table 2-1. "Pb Compounds Observed in the Environment." p. 2-8 and p.2-10. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

¹¹ Carr et al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795-5804. DOI: <http://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

¹² EPA (2022) Technical Support Document (TSD) for the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

The EPA notes that the responses in this section are focused on the aspects of the comments that relate to the lead NAAQS and lead monitoring. Responses to other aspects of these comments can be found in other sections of this document. For example, responses to: comments regarding environmental justice and equity are addressed in Section 3, children's health and their potential exposures near airports where covered aircraft operate, are in Section 4, comments regarding the endangerment finding are addressed in Section 5, comments regarding emissions of lead at airports in specific communities are addressed in Section 6.1, comments regarding regulation of lead from aircraft are addressed in Section 7.

Section 8.2.2. Comments Requesting Education and Outreach

Comment Number: EPA-HQ-OAR-2022_0389-0755-0001

Commenter Type: Private Citizen

Commenter: D. Milton

Organization:

Excerpt Text:

Lead is highly toxic and does not degrade. The harms have been known for hundreds of years. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems Lead harms adult cardiovascular health. No level of lead exposure is safe. We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families. We do not need more studies or data - we need action to protect children, our health, and our environment now.

Comment Number: EPA-HQ-OAR-2022_0389-0732-0002

Commenter Type: Other

Commenter:

Organization: Broadway Flushing Homeowners Association

Excerpt Text:

It is imperative that we transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public.

While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, that urban planners understand that children's playgrounds should not be sited next to general aviation airports, and so that workers can reduce their exposure and exposure to their families. We do not need more studies or data - we need action to protect children, our health, and our environment now!!!!!!

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-006-0002

Commenter Type: Private Citizen

Commenter: Richard Offerman

Organization:

Excerpt Text:

I am speaking here today as a concerned citizen. I have lived in the San Francisco Bay area, specifically

Pleasant Hill, since 1987. For the last 35 years, my wife and I have lived under the flight paths of our local general aviation airport. Contra Costa County operates Buchanan Field in Concord, California next door to Pleasant Hill. When I say busy, I mean Buchanan has well over 100,000 aircraft operations for years, they have been doing this for many years. I am here today, sorry, troubled as to why the use of leaded aviation fuel remains for the most part hidden from the communities that border the general aviation airfields. My community's environment is in harm's way, and yet only those who listen closely are aware of this clear and present danger that has lingered in our air for years. My community needs our EPA to finalize an endangerment finding on leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0202-0003

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

According to you, the EPA, the U.S.'s largest remaining source of lead emissions is from leaded fuel. It is imperative that the EPA put an "endangerment finding" on leaded aviation gasoline to reduce lead emissions in our environment, as well as continue to educate people and spread awareness on the dangers of lead. Without an "endangerment finding", we are falsely leading our population to believe lead is not as big a concern as it truly is. How can we expect parents, medical professionals, and others to believe the silent, harmful health impacts of lead, when our government allows leaded aviation fuel to be used in over 20,000 airports across the United States?

Comment Number: EPA-HQ-OAR-2022_0389-0534-0003

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

According to you, the EPA, the U.S.'s largest remaining source of lead emissions is from leaded fuel. It is imperative that the EPA put an "endangerment finding" on leaded aviation gasoline to reduce lead emissions in our environment, as well as continue to educate people and spread awareness on the dangers of lead. Without an "endangerment finding", we are falsely leading our population to believe lead is not as big a concern as it truly is.

Comment Number: EPA-HQ-OAR-2022_0389-0745-0002

Commenter Type: Private Citizen

Commenter: K Zolvik

Organization:

Excerpt Text:

And while (yet another) phase out of lead is occurring (hopefully more rapid than last time), I urge the EPA and other necessary agencies to implement an educational campaign targeting those living near, and in a 15-mile radius of every airport in this country. This campaign should contain comprehensive information on how to protect themselves from lead exposure. Another audience to this campaign should be urban planners who need to know to eliminate any planning for playgrounds, schools, and other facilities that serve children. These should not be sited near airports. And yet another audience are workers of all kinds should be aware of potential exposure to lead and how to reduce this and protect

themselves and their families. No more studies, please. We know what lead is and what lead does. It's time for you, the EPA, to do the right thing (again, for the last time).

Comment Number: EPA-HQ-OAR-2022_0389-0769-0005

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

My daughter is a childhood cancer survivor and she only has one kidney and has Stage1 chronic kidney disease. She is more vulnerable to air toxins and these lead emissions, so this issue is extra concerning for me. I have lived in many countries and traveled all over the world. I had a model plane collection when I grew up. I know the value and importance of the General aviation industry. I try to keep up with the issues about the environment and health. I literally found out about this lead emissions issue on August 18, 2022. I had no idea that these small planes had lead emissions or that the Long Beach airport had around 1000 GA aviation operations and around 4.5 lbs of lead emissions each day. I was even more shocked to find out that politicians, parents, residents, and school officials had no idea about this issue despite the Long Beach airport being #2 in the country. In the last 2 months I managed to get the issue on the front pages of 11 newspapers and on a TV station and the Long Beach city council introduced an agenda item to reduce these emissions. Why hasn't there been more awareness about it from the EPA or other officials? Schools and people who live near these general aviation airports in America should have been notified about this risk. Why did it take a lawsuit to try to get these fuel companies to do the right thing and alert the neighborhoods? According to my research on the Long Beach airport, they never did notify residents near the airport about these lead emissions. I believe that this issue has been deliberately hidden from the public. The EPA's lead poisoning info kit for their October 2022 lead poisoning awareness week didn't even list emissions from planes as a source of lead poisoning. I asked the EPA about this but never received an answer.

Comment Number: EPA-HQ-OAR-2022_0389-0652-0001

Commenter Type: Private Citizen

Commenter: Chris Dicesare

Organization:

Excerpt Text:

We do not need more studies or data - we need action to protect children, our health, and our environment now. Lead is highly toxic and does not degrade. These harms have been known for hundreds of years. Lead harms children's health causing damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and speech and hearing speech problems. Lead harms adult cardiovascular health. No level of lead exposure is safe. We need to transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public. While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families.

Comment Number: EPA-HQ-OAR-2022-0389-0256-0002

Commenter Type: Private Citizen

Commenter: Kathryn Sharpe

Organization:

Excerpt Text:

I worked for many years in a painting studio across the street from Kurtzer Flying Service on Lake Union in Seattle, WA, and realize now that I was unknowingly exposed to lead from the piston-driven seaplanes.

I am shocked and saddened to learn that there is still lead in aviation gasoline (avgas), and that it is the biggest source of lead emissions in our atmosphere (it accounts for 70%). In addition, our standards for lead, which is retained in the soil, are sadly behind the times and need an update.

Comment Number: EPA-HQ-OAR-2022_0389-0675-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: Montgomery County Quiet Skies Coalition, Ltd.

Excerpt Text:

While that transition is happening, a broad-based education and outreach campaign is needed so that communities near airports know how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, workers reduce their exposure and exposure to their families. We do not need more studies or data - we need action NOW to protect children, our health, and our environment now.

Comment Number: EPA-HQ-OAR-2022_0389-0691-0003

Commenter Type: Advocacy Organization

Commenter:

Organization: Quiet Communities, Inc.

Excerpt Text:

During a transition, the EPA should invest in a broad-based education and outreach campaign to ensure that communities near airports understand how to protect themselves from lead exposure, urban planners understand that children's playgrounds should not be sited next to general aviation airports, and workers know how to reduce their risk and risk to their families. Airport workers can expose their children when they bring lead dust home on their clothing, shoes, hair, etc (Shaffer, 1018; Needleman, 1999). We do not need more studies or data - we need action now to protect children, our health, and our environment.

Comment Number: EPA-HQ-OAR-2022-0389-0217-0008

Commenter Type: Private Citizen

Commenter: James Lubischer

Organization:

Excerpt Text:

Presently there are unleaded fuels for a significant percentage of aircraft. [Footnote 12: Unleaded fuels are now available for the majority of aircraft. See <https://www.aopa.org/news-and-media/all-news/2022/september/pilot/unleaded-fuels-swift-fuels>] However, as we have found at our [Italics: Hillsboro Airport,] there is reluctance to provide/encourage such fuels. Therefore, it is imperative that the EPA issue an endangerment finding and then ban leaded fuels without delay to protect children. The aviation industry will say that a [Italics: "phase in"] period will be necessary...but if granted it will be primarily at the expense of toddlers that live around airports where leaded fuel is used. Should the EPA

not ban as soon as possible and until then I ask that the EPA provide an information sheet to each household within 1.5 miles of an airport where aircraft use leaded fuel. The information sheet should explain that they and their children are in a high-risk zone for lead poisoning and the information sheet should also explain the effects of that poisoning. Also, I would suggest that EPA should ask for a law stipulating that any real estate transactions within 1.5 miles of any airport where leaded fuel is used be required to provide that same information sheet to prospective buyers.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-020-0001

Commenter Type: Private Citizen

Commenter: Debi Wagner

Organization:

Excerpt Text:

I have a long history in the community living near several airports around SEA-Tac Airport which is a commercial airport but also effected by Boeing Field and other airports. I have moved three times in my life as an adult to get away from what I have been aware of as toxic exposure is happening for people living on the ground and adjacent to airports. The science and data and history of this issue has been clear to EPA for several decades. The dangers of lead, air pollution have been known by EPA for decades. I do not understand why EPA has dragged their feet on this for so long. In the meanwhile, generations of children and families have been harmed unnecessarily. This is not a lot different from commercial aviation where you have these polluters bringing the pollution directly into our homes and our neighborhoods, our schools and our playgrounds. The exposures are unnecessary. If EPA had regulated airports as sources of criteria and toxic emissions, they would not have had to rely on faulty air quality data provided by regional monitoring networks that are purposefully set up to avoid these sources. These kind of injuries and harms that have been happening over decades to people that are -- that as I said are unnecessary has compelled the public to spend vast amounts of money for health care, scientific investigation on their own, years of life loss, working years that have been dedicated to all of these environmental activism campaigns just to get EPA and others to do their jobs. Their job is to protect public health, your job is to protect public health and the environment. To be swayed by monies, special interests, lobbyists, the industry itself rather than focusing primarily on your main job to protect public health has left a lot of people and families in the dark for decades about what is happening to them and their health. As these health issues become apparent and peoples' health is deteriorating, as they lose the ability to work and sleep and live normal lives, they are also required to spend countless hours and money and resources in time and energy they no longer have to get the industry and the industry's attention and the public health agencies to do their jobs. This is an injustice to the people in this country. I don't think there is any greater harm that can be done then to abuse a child, a child who is helpless and innocent and is being harmed and injured by these debilitating impacts. I don't understand EPA's position and I know EPA has taken the same position on commercial airports and the toxic emissions that they bring directly into our homes. It doesn't make any sense to me at all that EPA is not informing people and letting them know of these dangers. It's -- it's all about, it doesn't seem to be about public health, it seems to be all about power and clout and money, and that is not the role of the EPA.

Response to Comments Requesting Education and Outreach

Some commenters submitted comments requesting that the Agency conduct various education and outreach to stakeholders (including communities, urban planners, and workers) or asking why there was not more awareness regarding this subject. The EPA acknowledges these comments and intends to take them into consideration, where appropriate, in planning future education and outreach activities on this

subject. We further respond, however, that these comments are beyond the scope of this action and thus require no further response for the purposes of this action.

One commenter notes that the EPA's lead poisoning info kit for the October 2022 lead poisoning awareness week did not list emissions from planes as a source of lead poisoning. The EPA responds that comments related to the 2022 info kit are beyond the scope of this action and thus require no further response. For purposes of transparency and public information, the EPA notes that the Information Kit issued with the EPA's National Lead Poisoning Prevention Week in October 2022 focuses action on multiple sources of lead exposure for children including lead-based paint, lead-contaminated drinking water and lead-contaminated soil.¹³ However, because lead exposure can also result from other sources, the EPA has been separately evaluating engine emissions of lead from certain aircraft. The final findings issued today are the result of this evaluation.

Some comments assert that without an "endangerment finding," the population is being led to falsely believe that lead is not as big a concern as it truly is. The EPA responds that while the information discussed in this final action may help interested members of the public better understand the issues discussed and the conclusions reached, and while the EPA is endeavoring to communicate appropriately and clearly about these findings, the Agency cannot control whether third parties correctly understand the action or the process leading up to it. Similarly, we cannot control what inferences third parties may draw from the existence of the findings now that they are final, or from the absence of such final findings, during the period when they were being evaluated and developed. We further note that the purpose behind these final findings is not to influence the public's perception of risks from lead and these findings are not risk assessments for individual airports in the U.S. One commenter requests that the EPA provide an information sheet to each household within 1.5 miles of an airport where aircraft use leaded fuel containing certain content related to lead risks that the commenter believes should be provided. This comment also suggests that the EPA should ask for a law stipulating that any real estate transaction within 1.5 miles of any airport where leaded fuel is used be required to provide that same information sheet to prospective buyers. This comment is beyond the scope of this action and thus requires no further response.

In this section of the RTC, the EPA is focusing on comments related to requests for education and outreach. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. We respond to comments related to children's health and their potential exposures near airports where covered aircraft operate in Section 4 of this RTC document. Comments regarding the endangerment finding are addressed in Section 5 of this document, comments regarding the cause or contribute finding are addressed in Section 6 of this document, and comments regarding regulation of lead from aircraft are addressed in Section 7 of this document.

Section 8.2.3. Other Requests and Recommendations for the EPA Regarding Lead

Comment Number: EPA-HQ-OAR-2022-0389-0206-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

[Underlined: Simple changes in airport ground operations provides a ready solution to those airports that do not meet today's Lead NAAQS.] Recognizing the key variables in EPA's referenced studies, we undertook a simplistic evaluation of those airports listed in Table 2 of the "Proposed Rule", considering

¹³ EPA's 2022 National Lead Poisoning Prevention Week Information Kit can be found at EPA's website <https://www.epa.gov/system/files/documents/2022-08/2022%20NLPPW%20InformationKit.pdf>.

runup areas, distances, and prevailing winds. In order to better conceptualize the distribution of lead resulting from piston engine aircraft emissions, we set out to define an area that could be potentially affected by any incremental lead emissions resulting from aircraft. Our focus is therefore at the runup area and where lead from aircraft could be measured and distinguished from background lead. Using the observations derived from EPA's work above, and applying a basic assumption that airport runways are aligned with prevailing winds, an area was defined as the Cone of Distinguishable Aviation Lead Emissions (CODALE). Using the observations from the sources referenced in the "Proposed Rule", and applying two basic assumptions, the CODALE was established to be an area represented by a cone spanning an arc of 90 degrees at a distance of 500 meters from the run-up area. Typically, prevailing winds would be straight down the runway, varying no more than 45 degrees side to side (what would be referred to by pilots as quartering winds), hence the rationale for a 90 degree arc.

500 meters was chosen as the arc length for CODALE since that distance corresponds with the distances used in Tables 3, 4, 5, and 6 of the "Proposed Rule" to alleviate potential disparities of age, race, and ethnicity as it relates to distances from airport operations. This then would be the area to concentrate on to best address Environmental Justice. It is interesting to note that our evaluation also considered the 1000 meter range, with the same conclusions. The distance of 500 meters is especially important because it is the maximum distance that the study titled, "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels" was able to prove had a statistically significant increase in blood lead levels in children

Having established CODALE, we proceeded with an evaluation of the 17 airports listed in Table 2 of the "Proposed Rule". Additional data was collected for the subject airports and is shown in Table A of our comments. The length of the runway is a key variable in our study, ranging from 2,443 feet at Palo Alto Airport in California to the longest of 10,001 feet at Centennial Airport in Colorado. Where multiple runways existed at a particular airport, we chose to only consider and evaluate the longest runway. The average airport runway length was 5,300 ft, or 1616 meters. Cone of Distinguishable Aviation Lead Emissions (CODALE) is 500 meters in length, the average runway length would provide 3.2 times more distance than necessary to fully disperse lead emissions to a concentration indistinguishable from background levels.

We collected FAA published airport diagrams for each of the 13 controlled airports in the sample set and are providing them herein. In those instances where runup areas are identified, these were then selected as the high impact point. In those instances where runup areas were not identified, an estimate was made as to where the probable runup locations would be on the field based on the diagram and runway location. Handwritten notes related to scaling and establishing the CODALE are shown freehand on the diagrams. Our approach was that of proof of concept, a more thorough survey and collection of data at subject airports would yield more precise results. In all instances, the CODALE was established upwind, causing the distribution of exhaust gaseous to occur preferential on the airport property.

In the cases of the two California airports having lead concentrations greater than current lead NAAQS, McClellan-Palomar and San Carlos, Diagram 1 and Diagram 2 illustrate that CODALE remains on the airport property. Keeping in mind that lead monitoring outside of the CODALE would show lead levels that are indistinguishable from background concentrations of lead. We suggest that implementing the proposed CODALE solution would yield immediate results, benefiting those potentially impacted by aircraft engine emissions.

[See original document for airport diagrams 1 & 2]

[Underlined: Expanded on the concept of CODALE by illustration at additional airports.] Even though none of the 15 remaining airports in the study show lead levels to exceed the current lead NAAQS, we expanded our analysis of CODALE to further illustrate its effectiveness as a viable solution for managing aircraft engine lead emissions. We were able to collect additional airport diagrams from FAA sources for

the remaining 11 controlled airports, overlaying those with the proposed CODALE methodology. The CODALE modified diagrams are included in Appendix B for your review and consideration.

[Underlined: A solution exist to modify ground operations rather than modify engines or fuel for in-flight operations to meet the stated objective of the Proposed Rule.] In every case evaluated, the CODALE remained on the airport property. The airport schematics provide a pictorial depiction of how lead emission would be reduced to levels indistinguishable from background levels before leaving the airport property, all contained within the CODALE. In other words, the solution to the problem is to relocate runup areas to the upwind end of the runway. The solution is dilution. The significance of this observation is that lead emissions can be immediately addressed, without the need to mandate new fuels or modify the existing aircraft fleet. This solution provides for environmental justice without the burden, costs or safety concerns associated with a mandated fuel approach. The proposed solution would not require the expansion of regulatory authority, but instead FAA could exercise its current authority and implement these procedural changes through existing avenues. Efforts could be focused at those airports that are high risk or in close proximity to sensitive areas, such as McClellan-Palomar CA, San Carlos CA, and Reid-Hillview CA, saving both government and private sector time and resources.

[Underlined: CSA does not advocate the use of a CODALE solution at every controlled airport.] CSA would support the use of the CODALE solution only at those facilities demonstrating higher lead levels than meets the NAAQS, and those airports that seek a ready solution for Environmental Justice. CSA recognizes that the additional ground operations, requiring aircraft to taxi greater distances prior to takeoff, does expose pilots to higher risk of runway or taxiway incursions and must be taken into consideration before implementing the CODALE solution at a particular airport. FAA is keenly focused on runway incursions today and could simply incorporate CODALE into these important safety policies and procedures.

[Underlined: An opportunity exists to optimize the management of Aviation Piston Engine emissions while minimizing the risk to pilots.] By utilizing a midfield runup area, Grand Junction Regional Airport (KGRT) in Colorado has already implemented the ideal solution when considering both emissions and pilot safety. Diagram 3 in our comments today illustrates pictorially how lead emissions, distinguishable above background levels, are managed onsite, while minimizing ground operations of pilots prior to take-off. By establishing the runup area midfield, Grand Junction airport has given pilots the ability to performer the important runup phase of flight at a distance far away from the property boundaries and any surrounding communities. Grand Junction proves that there is a workable solution, already in place today.

[See original document for airport diagram 3]

CSA encourages FAA and EPA to take this real-world example and expand on its application. FAA and EPA, along with the appropriate airport managers, could work together, considering risk, balanced with the need for Environmental Justice, as they determine the best airports and methods to implement CODALE. Effectiveness could be measured directly through the appropriate monitoring studies. We would expect the total number of airports to be a very small percentage of the 13,000 US airports considered in the “Proposed Rule”. CSA would expect less than 100 airports nationwide.

Appendix B

Controlled Airports and Associated Airport Diagrams with CODALE Applied

The airport diagrams shown in this appendix are to further illustrate the application of CODALE in managing aircraft engine emissions. These airports were chosen because they existed in the original study of 17 airports where lead concentrations were monitored. Each of the 11 airports shown in this appendix are controlled airports, none of which demonstrated lead values in excess of the current lead NAAQS.

The Cone of Distinguishable Aviation Lead Emissions (CODALE) represents an area where lead emissions could be detected – at levels greater than background levels. Areas outside of the CODALE

would have lead levels indistinguishable from background levels. When it comes to exposure to lead emissions – Dilution offers an immediate is the Solution

Airport Diagrams Include in Appendix B

Centennial Airport, CO
Deer Valley, AZ
Gillespie Field, CA
Merrill Field, AK
Nantucket Memorial Airport, MA
Oakland County International, MI
Palo Alto Airport, CA
Reid-Hillview Airport, CA
Republic Airport, NY
Stinson Municipal, TX
Van Nuys Airport, CA

[See original document for airport diagrams]

Comment Number: EPA-HQ-OAR-2022-0389-0138-0004

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

In the meantime and because the Leaded Fuel Proposed Finding, if finalized, would not result in the proposition of regulatory standards until 2023 at the earliest, I advocate for the EPA to consider implementation of strategies to mitigate detrimental public health consequences. The issue of lead exposure, especially as a developmental neurotoxin, is urgent; a study conducted using gas consumption data by Florida State University and Duke University found that [bold: childhood lead exposure has so far cost America an estimated 824 million intelligence quotient points, averaging to about 2.6 per person.] [Footnote 7: NBC Health News. (2022). Lead from gasoline blunted the IQ of about half the U.S. population, study says. Available at: <https://www.nbcnews.com/health/health-news/lead-gasoline-blunted-iq-half-us-population-study-rcna19028>] Responsiveness for this issue cannot be delayed, and no safe amount of lead exists, according to the Centers for Disease Control and Prevention. [Footnote 8: Centers for Disease Control and Prevention. (2022). Health Effects of Lead Exposure. Available at: <https://www.cdc.gov/ncch/lead/prevention/health-effects.htm>]

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-034-0001

Commenter Type: Advocacy Organization

Commenter: Robert Germann

Organization: Citizens Against Gillespie's'Expansion Low Flying Aircraft

Excerpt Text:

I am a retired Teamster, truck driver, have 30 years in, I delivered fuel to airports and to gas stations and it's amazing to me that we are ---till have lead in AVGAS. A couple of things, and obviously our group supports the banning of leaded AVGAS, and I know this is the first step so obviously we support the endangerment finding and in the interim, small general aviation aircraft should not be allowed to do touch and goes which is called pattern work in airports that are located inside the city limits flying over our kids. They can do their flight training out in the boonies and so that's my recommendation there.

Comment Number: EPA-HQ-OAR-2022-0389-0242-0006

Commenter Type: Think Tank

Commenter:

Organization: National Center for Health Research (NCHR)

Excerpt Text:

At the same time, research is needed to improve our understanding of the impact of leaded fuel on health and alternatives that will be used to replace leaded fuel. To ensure that strict standards on lead emissions reduce the harm to nearby communities, EPA should conduct and support research to evaluate the health impact of leaded fuel on children and adults of different age groups who live or work at differing distances from airports where leaded fuel is used. EPA should also conduct or support research to determine the impact on children and adults living or working at various distances from airports where these alternative fuels are used.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0010

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The Associations therefore respectfully urge the EPA, in coordination with the FAA, to ensure that any final finding in this matter and follow-on regulatory actions to appropriately and responsibly address this issue does not invite or motivate State, local, Tribal, or territorial governments to take premature action by attempting to impose unlawful and preempted restrictions on the dispensation of 100LL aviation gasoline, pending the completion of the government-industry work described above and the deployment of a viable unleaded replacement for 100LL that meets the safety and operational requirements of the entire piston fleet.

The Associations appreciate the opportunity to provide our perspectives and look forward to further collaboration and partnership with the EPA and FAA in furtherance of our shared objective of eliminating lead from aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0236-0004

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The EPA also must immediately

- 1) measure lead (air, water, soil) and noise in all neighborhoods within five miles of flight paths with special attention to aviation training/recreational activities popping up haphazardly all over the country,

Given that the FAA and local entities have proven their unwillingness to participate in public safety efforts if in conflict with their economic interests the EPA must circumvent this barrier by

working directly with the public. NIOSH has developed and validated a free noise meter for the iPhone and research universities around the world are already partnering with Apple and the public to collect noise data. The EPA must do the same. This public model also must be used to collect ambient, water, and soil lead measurements across the country.

- 2) post online in real time all collected lead and noise data by neighborhood,
- 3) post online related research and lead/noise guidelines (e.g., EPA, WHO, CDC, NIDCD, NIOSH) intended, contrary to FAA materials, to protect the public,
- 4) clearly state online how the public should prevent and mitigate harm to person and property based on said materials including devastating harms such as lead poisoning, noise induced hearing loss and noise associated heart attack and stroke,
- 5) stop the use of the word nuisance in reference to aviation noise and the use of other false representations designed to minimize and suppress the seriousness of related harms,
- 6) require full and detailed disclosure of potential harm to person and property with each real estate transaction within five miles of flight paths to circumvent attempts by the FAA and local entities to hide the information,
- 7) post online a public complaint and complaint resolution platform with real time publicly posted complaint counts by neighborhood as well as actions taken to resolve each complaint to again circumvent FAA/local efforts to suppress such information,
- 8) require that the FAA
 - a) post online a continually updated list of all public/private flight paths, including those of training/recreational programs, as well as gallons and concentration of leaded fuel sold at each aviation facility,
 - b) post real time flight data, inspections and violations along with related regulations for all U.S. airports to prove it is regularly monitoring, preventing, identifying and addressing unsafe flying behavior,
 - c) regularly update and post its noise guidelines and studies with the caveat that these materials conflict with and must not be used in place of EPA, WHO and NIOSH guidelines in assessing public harm.

Every day the EPA continues to sit on the sidelines is a day more people are harmed by uncontrolled aviation activities. The FAA and local entities are public safety liabilities in this regard not EPA alternatives. If the EPA is going to continue to sit on the sidelines then it must clearly state to the public that the public is on its own when it comes to protecting itself from aviation harm.

Comment Number: EPA-HQ-OAR-2022-0389-0167-0006

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

In closing, since solutions exist to address the concerns above, there is no reason that these policies should not be enacted. Arguments against are hollow and are a small voice that are trying to argue costs are too high. That is an incorrect position and should not be entertained. Pass these regulations on lead...but let's expand this to address the problem holistically. Further efforts are needed to mitigate the health effects of noise and tailpipe (NOx) emissions in general, especially since this has typically been an exempted source. The auto industry has made a seamless transition, there is no reason the aviation industry can not do the same.

Comment Number: EPA-HQ-OAR-2022-0389-0167-0004

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

(4) While not the focus of this review, I do note two additional points:

(a) The EPA has declared the Denver and surrounding area air quality as "Severe". This requires a number of changes to the surrounding area to tackle ALL sources of pollution. Given the area operates a number of flight training schools, it is paramount that we address the emissions of ALL emitters. While the aviation industry has typically not been required to do so, the level of concern here requires their participation. Tackling the leaded fuel issue is one step....however, airplanes in general need additional regulation here to remove old service systems (many of these planes were built in the 60s) and transition to more efficient systems. Given the air designation of "Severe" for this area, extreme measures need to be taken to prevent an ongoing health catastrophe that is sure to burden the community with future healthcare costs.

(b) Not discussed is the effect of these older engines and resulting noise pollution generated from them. Many of these engines do not contain muffler or catalytic systems which present both a noise and emission pollution to the local area. At present the community is in a lawsuit with the RMMA airport due to violating noise agreements. Many of these aircraft exceed the 60db threshold required to operate in the local area. Further, retrofit kits do exist to mitigate these additional health risks but are not, at present, required. The EPA needs to relook these older systems and consider the additional sources of pollution being generated but not regulated. Given that solutions exist to address, this seems an easy problem to solve.

<https://northglenn-thorntonsentinel.com/stories/rock-creek-hoa-finds-a-win-in-lawsuit-against-rmma,394594>

Comment Number: EPA-HQ-OAR-2022-0389-0138-0005

Commenter Type: Private Citizen

Commenter: Katherine Ambrose

Organization:

Excerpt Text:

To fulfill their claim that “protecting children’s health and reducing lead exposure are two of EPA’s top priorities,” [Footnote 9: United States Environmental Protection Agency. (2022). Regulations for Lead Emissions from Aircraft. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-lead-emissions-aircraft>] [Bold: As it is the EPA’s responsibility to protect people from known health effects, I encourage the EPA to consider funding both soil cleanup of soluble lead halides and access to developmental and neuropsychological assessments. Especially for an issue which suffers privilege-based disparities in health coverage, [Footnote 10: Kaiser Family Foundation. (2021). Health Coverage by Race and Ethnicity. Available at: <https://www.kff.org/racial-equity-and-health-policy/issue-brief/health-coverage-by-race-and-ethnicity/>] such action is necessary while remediation of exposure sources are effectively addressed.]

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-017-0001

Commenter Type: Private Citizen

Commenter: Ernesto Barajas

Organization: Cassell Neighborhood Association

Excerpt Text:

My name is Ernesto Barajas. I am a member of the Cassel area. At the outset, I thank you for the opportunity to be able to share the experiences I have had together with my family in this neighborhood to the East of San Jose for over 30 years. I believe the time has come to be heard please and get your help to shut down this airport. You are aware of all the damage that is causing to our health due to the fuel that the airplanes flying every day of the week, 7 days a week, 24 hours a day, use. Lead is more dangerous than poison because it is damaging our bodies, according to the doctors, and it is causing problems in our bones, in our brain and blood. My children, my grandchildren, and all my family have been exposed to this poison that is killing us. Additionally, there is the danger of an airplane crashing against our homes or a school at any time. We have 2 schools in a 2-mile radius from the airport. These children, parents, teachers fear that a plane may crash and end with our lives because many planes have crashed around in the neighborhood. Within four houses of where I live, a plane crashed years ago. The children are traumatized because when they hear the noise of a plane, they run, according to their parents, to hide under the bed out of fear that something may happen to them. I have grandchildren. They spend time indoors my house. They want to play in the yard. But we are afraid of air pollution. Four months ago, a land test was conducted, and my house had some of the highest results in the study. I hope you consider all our comments and hopes for our community. From the outset, I thank you all and hope you make a decision and that you are aware of what is happening in our community because of the Reid-Hillview airport. You are our hope for the future of our community, in particular our children who are the future not only of San José, but the world. Then I hope that the next time you bring us good news because you are the only ones who can help us close down the airport.

Comment Number: EPA-HQ-OAR-2022_0389-0682-0001

Commenter Type: Other

Commenter:

Organization: Cassell Neighborhood Association

Excerpt Text:

There should be no airports in any residential areas. The EPA should take a strong stand to ensure the safety of all communities living under these conditions. Everyone deserves to have quality of life regardless of the color of their skin or the amount of money in their bank account. What decision would you take if your children were living under these circumstances?

Comment Number: EPA-HQ-OAR-2022_0389-0324-0006

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The main reason for why these "covered aircraft" are causing so much lead pollution is because they use lead-based fuel called "avgas", which is currently the only transportation fuel in the US that contains lead. The average age of these covered aircraft is around 50 years old, so they have failed to adapt to the newer

and more environmentally friendly jet fuel that does not contain lead. The EPA and FAA cannot ban the use of these planes since they play pivotal roles in pilot training, search and rescue, and even pest management in agriculture, but what they can do is put pressure on finding alternative fuels for these airplanes. Similar to how the EPA and the CAA forced cars to switch to unleaded fuel, the same can be done for these airplanes. The EPA must put pressure on the FAA and fuel companies to pursue the use of unleaded fuel because the role of the federal governments is to protect the people and the environment that live by these airports and that are directly exposed to lead every day. These populations have no control over the exposure of lead and there is no reason that our population and environment should be exposed to these toxic pollutants, especially when unleaded plane fuel (such as 82UL) can be used instead of the avgas used today.

Comment Number: EPA-HQ-OAR-2022_0389-0725-0002

Commenter Type: Private Citizen

Commenter: S. H.

Organization:

Excerpt Text:

For years the FAA has said it would develop a non-leaded fuel that would work in fixed wing aircraft currently using leaded fuel. That hasn't happened. It's time for EPA to buck the apparently very powerful lobbying of private pilots or commercial pilots & owners of fixed wing aircraft using leaded fuel--and decide that public HEALTH matters more.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0025

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Contamination Abatement, Remediation, Cleanup, Removal and Disposal]

And finally, what about the Cleanup, Remediation & Disposal of the existing General Aviation (GA) Tetraethyl Lead (TEL) contamination mess? Who is going to fund that? Yet another massive non-taxpayer problem without a solution. Shouldn't users AND associated Cartels for Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) s pay for their past, present and continued usage? Any reasonable person might think so?

Hey wait a minute! What if someone lives or goes to school in an "Active" Aviation Related Brownfield? Let's not forget about Human Lives, especially the Vulnerable Populations including Pregnant Moms, Babies, School Children and Elderly living very near, or going to school some right on top of contaminated poisoned areas directly under 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) daily use. How will the 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene Dibromide (EDB) Debacle and its associated mess going to be cleaned up? TEL + EDB won't disappear by themselves, right?

Brownfields (html) | Overview of EPA's Brownfields Program (html) | US Environmental Protection Agency (EPA). A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant including 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene dibromide (EDB). It is estimated that there are more than 450,000 brownfields in the U.S. Cleaning up and reinvesting in these

properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment.

Underground Storage Tanks (USTs) (html) | US EPA. Approximately 542,000 underground storage tanks (USTs) nationwide store petroleum or hazardous substances. This includes all of or almost all of the 20,000 So-called Aviation Facilities across the United States using 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene dibromide (EDB). The greatest potential threat from a leaking UST is contamination of groundwater, the source of drinking water for nearly [bold: half] of all Americans. EPA, states, territories, and tribes work in partnership with industry to protect the environment and human health from potential releases.

Lead Scavengers AKA Ethylene dibromide (EDB) Compendium: Overview of Properties, Occurrence, and Remedial Technologies (pdf) May 2006 | US Environmental Protection Agency (EPA). The compendium is the first of three phases of work EPA, along with state and regional UST programs, are undertaking to determine the scope and magnitude of lead scavengers at leaking UST sites nationwide. Investigations have revealed that lead scavengers may persist for long periods of time in certain groundwater environments. Consequently, EPA and states are continuing their investigation into the potential presence of lead scavengers at UST sites.

Leaded-Gasoline ADDITIVES Still Contaminate Groundwater (pdf) September 15, 2005 | Environmental Science & Technology (EST) | American Chemical Society (ACS). Ethylene dibromide (EDB) and 1,2 dichloroethane (EDC) persist at high levels despite a phaseout in the late 1980s, but they get little attention. As of the early 2000s, only 11 states require testing for Ethylene Dibromide (EDB) in groundwater at sites contaminated by leaded gasoline including 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) that contains equal amounts of Ethylene dibromide (EDB) as a chemical scavenger. How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers (html) | US EPA. Learn about 14 alternative cleanup technologies, including soil vapor extraction (SVE), air sparging, biosparging, landfarming, and more. The original guide, developed in 1994 (EPA 510-B-94-003), addressed eight alternative technologies. EPA has updated the guide several times.

SEE: example of Guide for Corrective Action Plan Reviewers with information regarding Tetraethyl Lead (TEL) e.g. How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites - A Guide for Corrective Action Plan Reviewers, Chapter 8, Biosparging (pdf).

SEE: Federal Remediation Technologies Roundtable (FRTR):

-FRTR Agency Program Links - Resources (html).

-FRTR Technology Screening Matrix (html).

Seems to be a lack of current, contemporary codified up to date “Best Practices” or Guidelines regarding strategies or tactics for dealing with 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) & Ethylene Dibromide (EDB) contamination:

-Dynamic Geochemistry of Tetraethyl Lead Dust during th^c 20th Century: Getting the Lead In, Out, and Translational Beyond (html) 04-26-2018 | (IJERPH) | MDPI. Int. J. Environ. Res. Public Health 2018, 15(5), 860; <https://doi.org/10.3390/ijerph15050860>.

-Heavy Metals in Contaminated Soils: A Review of Sources, Chemistry, Risks and Best Available Strategies for Remediation (html) 10-24-2011 |

-Feasibility study for the remediation of groundwater contaminated by organolead compounds (html) 12-23-2007 – PubMed Central (PMC) | National Center for Biotechnology Information (NCBI) | National Library of Medicine (NLM) | National Institute of Health (NIH) | U.S. Department of Health & Human Services (HHS) | USA.gov. Assess the effectiveness of chemical oxidation, Advanced Oxidation Processes (AOPs) and adsorption on granular activated carbon (GAC) for the ex situ remediation of groundwater contaminated by organolead compounds, including Tetraethyl Lead (TEL).

NOTE' It's important when defining or discussing 'heavy metals' & related topics including Lead (Pb): Metallic lead, which usually includes all Inorganic lead compounds (e.g., laboratory reagents, products such as lead-based paint, solder, sometimes lead soaps etc.) to realize ALL other Organic lead (organolead) compounds, such as Tetraethyl Lead (TEL), are usually excluded from those definitions and discussions.

The handling of organoleads or Organic Tetraethyl Lead (TEL) are addressed much differently than Inorganic Lead. Occupational Safety and Health Administration (OSHA) does NOT address Tetraethyl Lead (TEL) in their rules, regulations or best practices. ALL armed forces & military branches and the DoD also address Tetraethyl Lead (TEL) separately, all do so very very quietly with minimal to zero fanfare. Seems to be pretty complicated stuff that should be vetted by appropriate Medical SMEs for any safety and operational concerns to ensure the Health, Safety & Welfare as well as the Economic Health of the surrounding community or communities and should be compartmentalized for easy replication and re-use by any unsophisticated, perhaps inept, local airport administrator / manager whose base qualification appears to be groundskeeper that can operate Air Conditioned Golf Course Lawn Grooming Tractors, some interest in or experience with or even owning a Flying Junk Pile (FJP) and the multitude of local municipalities & governmental bodies at site locations stuck er that host facilities with unwanted Negative Aviation Impacts (NAIs) once they figure out er justify to get rid of er eliminate er decommission, redevelop and reuse / repurpose the property or properties for community use by all residents that appear to be happening across the United States with increasing frequency.

Enact Federal MANDATES for Airport Cooperative Research Program (ACRP) Key Airport Guides

Taxpayers demand Federally MANDATED Request for Proposals (RFPs) to conduct research for new Airport Guides as part of the Airport Cooperative Research Program (ACRP) promoted, sponsored & championed by the Transportation Research Board Cooperative Research Programs (TRBCRP) | Transportation Research Board (TRB) | National Academies (NA) Sciences (NAS), Engineering (NAE), Medicine (NAM) to develop reusable standard operating procedures, framework & decision matrix and that addresses the multitude of potential unique site properties to:

-Evaluate, Verify and Validate Medical Implications of Long-Term Exposure to Unleaded Aviation Fuels with Proprietary Unleaded Chemical Compositions (PUCCs)

-Implement 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Contamination Abatement, Remediation, Cleanup, Removal, Disposal Best Practices, Protocols & Knowledge Base.

The final deliverables for both projects should be Identical or very similar to ACRP 03-73 [Pending] Airport Guide for Transitioning to Unleaded Aviation Gasoline, and should include: a 10-15 page Primer; Guide; Tools and resources; Final report documenting the entire research effort and results; Technical memo titled, "Implementation of Research Findings and Products"; Summary of Key Findings; and Further Recommended Research Memo, and adhere to the same or similar research plan and should include, at a minimum, interim deliverables and also include, at a minimum, the same or similar checkpoints and final deliverables.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0027

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[**Bold:** Summary: Eliminate Negative Aviation Impacts (NAIs): Finalize Endangerment Finding & Enact Complete Ban of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)]

There is truly a proven need for the small percentage of real airports with real aircraft that actually

provide real demonstrable transportation needs, real jobs and real tax revenues, many others are simply self-perpetuating personal hobby, sport, recreational entertainment social venues cleverly protected & mostly hidden by the world's largest groups of Special Interests & Industry Lobbyists amongst overall aviation statistics that enable increased non-essential aircraft, including helicopter take-offs, landings, accidents & crashes, regularly flying aircraft with improperly configured or broken, tampered with or disabled ADS-B coupled with "disturbing the peace" and "public nuisance" revenge fly-bys intended to bully, harass and intimidate providing Communities utterly ZERO Socially Redeeming Values (SRVs) including unnecessary Negative Aviation Impacts (NAIs):

- Adverse Health, Safety and Welfare impacts
- Environmental impacts of toxic pollution & noise pollution
- Diminished quality of life
- Reduced Community desirability & property valuation
- Wasted taxpayer money

The American Public deserves truth, protection, accountability and justice provided by action, answers and comprehensive information including environmental and public health impacts, rather than continued myopic, self-serving and unquestioned Aviation Industry, Special Interest and Industry Lobbyist Propaganda, influence peddling and artificial delays.

The Scientific and Medical Facts regarding Negative Aviation Impacts (NAIs) are simply NOT debatable:

- NO safe level of lead in a child's blood with adverse irreversible impacts, even small amounts contribute to an elevated risk of IQ loss, ADHD / Autism, juvenile delinquency, impulse control, developmental delay, learning and behavior problems, increased violence, etc.
- Newborns exposed to lead can experience premature birth, low birthweight, slowed growth, etc.
- Adults exposed to lead are at greater risk of cancer, coronary heart disease, premature death, high blood pressure, strokes, kidney disease, reduced fertility, reproductive problems, childbirth birthing delivery problems miscarriages, etc.
- Aviation noise can interfere with reading comprehension, cognitive functioning, sleep disturbances and many other related health problems, etc.

It's time to stop living in the past as a crutch to protect current investments in outdated toxic, dangerous aircraft & practices once and for all. Seems like true "Multiple Conflicts of Interest" from the "Gate Keepers" on many levels across the Aviation Industry, Special Interests & Industry Lobbyists.

Piston-Engine Aircraft (PEA) including Piston-Engine Helicopters, collectively AKA Flying Junk Piles (FJPs), have an [bold: average age of 50 years old]! Taxpayers don't care about personal 1930s & 1940s Piper Cubs, 1950s Aeroncas, 1960s Mooneys, 1970s Cessnas or Pipers, 1980s Beechcraft Bonanzas, home garage (clown) built Experimental Amateur Built (E-AB), WWI or WWII Bombers, Bell 47s, Robinson R22s or Sikorsky H34s, museum pieces, collectors' items or other flying toys for the wealthy, and certainly NOT for any FJPs that cannot utilize existing Unleaded Fuels.

50 year old Flying Junk Piles (FJPs) have [bold: absolutely nothing] to do with the [bold: future of anything]!!!!

Time to [bold: RETIRE] 1/3 of the so-called General Aviation (GA) "Fleet" of personal hobby, sport, recreational entertainment social Flying Junk Piles (FJPs) that cannot utilize existing Unleaded Fuels and remove Associated "Government Handouts, Entitlements and Grant Assurance Obligations" from associated personal hobby, sport, recreational entertainment social venues / airstrips / facilities / infrastructure.

These are [bold: NOT] taxpayer problems and should [bold: NOT] utilize [bold: ANY] taxpayer money at all. Certainly, no more support than Hunting, Fishing, Boating, Golf, Bowling, National Parks & Camp Grounds or other personal hobby sport recreational social entertainment venues or pursuits receive.

[**Bold: Taxpayers Saddled with Thousands of Unnecessary Non-Essential Hobby, Sport, Recreational Entertainment Social Venues That Are NOT Taxpayer Problems That Are Sources of Negative Aviation Impacts (NAIs) Shamelessly Bloating the United States (US) Tax Burden with ZERO ROI**]

[Image of United States showing general aviation airports in the US national airport system]

General Aviation (GA) airports & airstrips in the Tragically Out-of-Date, Out-of-Touch United States (US) National Plan of Integrated Airport Systems (NPIAS). Small public airports & airstrips with few or no scheduled passenger flights. NOTE: FAA classified 2,903 airports, 10 heliports, and 39 seaplane bases largely serving General Aviation (GA) eligible for federal support AKA “Aviation Welfare” via Airports Capital Improvement Plan (ACIP) AKA “Government Handouts”. More than 13,100 airports & airstrips, many little more than tiny parcels of mostly private properties with a clear grass area, serve piston- engine aircraft (PEA) including piston-engine helicopters (PEH) nationwide. Clearly the Root & Source of Negative Aviation Impact (NAIs) Protected Fiefdoms across the United States are [**bold: NOT**] Taxpayer problems at all!

Executive Summary, Conclusion & Taxpayer Demands

Millions of Taxpayers deserve Accountability, Justice and Protection from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Involuntary Poisoning” violating individual “Bodily Integrity” rights protected by the United States Constitution including vulnerable populations such as pregnant moms, babies, school children & elderly and DEMAND:

-Immediate Full Endangerment Finding for Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)

-Immediate Ban on Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)

-Immediate Distribution of Multiple Existing Unleaded Aviation Fuel’s including Mogas per National Aeronautics and Space Administration (NASA) Regional Air Mobility (RAM) Blueprint with Back to Basics "Targeted Investments" at an enormous number of readily available Local Municipal, County, State or Federally owned Commercial Grade Federal Aviation Administration (FAA) Towered facilities Across Entire United States

-Remedy & Right-size ridiculous ancient phony Federal Aviation Administration (FAA) justifications / ROI calculations, Budgeting and Bloated “Government Handouts” AKA “Aviation Welfare” AKA Airports Capital Improvement Plan (ACIP)

-Terminate & Right-size outrageous Subjective Monopolistic Protectionist Arbitrary Federal Aviation Administration (FAA) manufactured Bureaucratic Grant Assurance Obligations, harmful Protections & Red Tape

-Remove & Right-size ANY Federal Support and or subsidies and or “Government Handouts” AKA “Aviation Welfare” for non-essential & un-needed Personal Hobby Sport Recreational Social Entertainment Venues & Privately Owned Commercial Businesses

-Enact Federal MANDATES with stringent requirements eliminating Loopholes and “Multiple Conflict(s) of Interest” on Federal Aviation Administration (FAA) to expedite the process of eliminating Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) “Once and for All”

-Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Evaluate, Verify and Validate Medical Implications of Long-Term Exposure to Unleaded Aviation Fuels with Proprietary Unleaded Chemical Compositions (PUCCs)

-Enact Federally MANDATED Airport Cooperative Research Program (ACRP) Key Airport Guide to: Implement 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Contamination Abatement, Remediation, Cleanup, Removal, Disposal Best Practices, Protocols & Knowledge Base

-Extricate RAMPANT Special Interest & Industry Lobbyist Pariah Political Agendas, Multiple Conflicts of Interest, Mis-Information, Dis-Information, Propaganda & Influence Peddling

-Enact Federally MANDATED U.S. Government Accountability (GAO) Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Transition Investigation

Comment Number: EPA-HQ-OAR-2022-0389-0230-0008
Commenter Type: Advocacy Organization
Commenter:
Organization: Close Reid-Hillview Airport Now! Coalition

Excerpt Text:

Lastly, our coalition asks the EPA to support the communities in their fight to close the Reid Hillview airport. While we understand you do not have the authority to order the closure of the airport, EPA can and must urge the Federal Aviation Agency (FAA) to take this action, as community members have demanded for decades. Cassell and surrounding neighborhoods have long suffered the nuisances the airport poses, including noise pollution, crashes, and most dangerously, exposure to toxic airborne lead fumes. Many children living in the neighborhood suffer from learning disabilities and according to a Santa Clara county report, if the pollution ended, children living in the area would see an increase between “\$11 million to \$25 million in lifetime earnings”.

Community advocates want one thing: the closure of the airport to repurpose the 180 acres of land for a community-centered vision so their families can have a safe neighborhood to live in and thrive in. We urge the EPA to support this dream by advocating for the closure of Reid Hillview. Additionally, Cassell Community is asking for restitution for families living in the affected East San Jose area. We feel the taking of these small steps will be a historic remedy to correct the injustice for the many families who have had to endure living under lead-contaminated air for over the last forty years.

Comment Number: EPA-HQ-OAR-2022-0389-0251-0002
Commenter Type: Private Citizen
Commenter: Maria Reyes
Organization:

Excerpt Text:

On behalf on the Cassell Community, I am asking for an early closure of this airport and restitution for our minority families who have suffered this injustice through the redlining practices of our former policy makers beginning in the '930's.

It should not be money or politics that dictate the quality of life. Everyone should have quality of life regardless of the color of their skin or the amount of money in their bank account.

I am asking that you look to your moral compass and bring justice to a damaged community. Our children deserve a better future.

Comment Number: EPA-HQ-OAR-2022_0389-0646-0001
Commenter Type: Private Citizen
Commenter: Groton Ayer Buzz
Organization:

Excerpt Text:

The harms of lead have been long known. Lead harms children. Lead harms adults and no level of lead exposure is safe. There needs to be a rapid transition to lead-free aviation fuel. Non-essential flight should be halted in any aircraft still using leaded aviation fuel. We need action now to protect people and to protect our environment. There is no need for any more delay.

Comment Number: EPA-HQ-OAR-2022-0389-0252-0001

Commenter Type: Private Citizen

Commenter: Mark Zuberek

Organization:

Excerpt Text:

Our residents have been inundated with aircraft flying over our peaceful neighborhoods for many years. The lead fuel issue has been identified years ago and there is no response from the management of the airport. We have reached out to the governing body at first about the noise created by the small engine aircraft and now have identified this fuel issue and realized that we have been living under a cloud of poisonous gases emitted from these engines.

Our first attempt was to make our neighborhoods safe from the noise. Our attempt has been ignored.

Our pleas are primarily for safety and noise free neighborhoods. Our current issue is with the safety and health of our children and the elderly. The requests for a EPA impact study have been ignored and now our airport has become a health issue.

These comments are not frivolous and must be considered for our quality of life and the enjoyment of our residents.

The request for an EPA impact report does not only rely on the emissions but for the overall master plan being considered for our regional airport. The runways are planned to be extended by 600 feet which will place the runways into our living rooms. The emissions of the lead fuel is located in the entire airspace being used over Danvers, Beverly and Wenham, MA the abutters to the airfield. We need to protect all our residents from the harmful fumes. The fuel depot is located on the Danvers parcel and extends directly into our neighbors living rooms. What is the effect on these neighbors?

These comments are a result of many meetings with the BVY airport commission. So please consider these comments as a result of many residents in our town. There have been meetings of at least fifty residents that feel as I explained.

Comment Number: EPA-HQ-OAR-2022_0389-0618-0001

Commenter Type: Aircraft Owner/Operator

Commenter: John Schreiber

Organization:

Excerpt Text:

I have been a pilot since 1984, have owned many piston engine aircraft, and I am an aircraft mechanic. I am also a US citizen, and I am ashamed by the lack of performance by most administrative entities, including the EPA. IIRC, it took until 1978 to ban lead in paint in this country, though it was known to be harmful prior to WW2. It took until 1996 to ban lead in auto fuel, with Biden arguing for lead. If anyone looks seriously at the record, you will find that the piston engine manufacturers and aircraft sellers have avoided every CAA pollution regulation since the beginning of time. We still have the equivalent of road draft tubes for crankcase ventilation. HC, CO, and NOx are ignored, except in the aircraft cabin by pilots who wish to stay alive. I am willing to ignore the special treatment regarding currently regulated road vehicle exhaust emissions. I mention this to remind other commenters of the special treatment by exemption we aviators receive. Please find leaded fuel to be an endangerment to public health and welfare. Below are additional comments relating to getting the lead out Mandate that the 100ULL specification become the maximum allowable lead content immediately. Immediately ask Congress to mandate at least one self serve 94UL (<https://www.swiftfuelsavgas.com/faq>) or Hjelmc0 91/96UL (https://www.hjelmco.com/pages.asp?r_id=13395) tank and pump at all high population density GA usage airports, with the fuel to be sold at a price lower than 100LL. This should be in effect until 100UL

is readily available. Take the land by eminent domain, if needed, to place the pump and tank. Mandate that the FAA negotiate and pay for the G100UL STC (<https://gami.com/g100ul/g100ul.php>) for every aircraft, if EAGLE does not have a solution by 2025. This would be the penalty for failing to get 100UL fuel done, by (PAFI) in 2012. Mandate that the FAA fast-track and pay for certification of water-methanol anti-detonation system Supplemental Type Certificates, such as: https://www.flyinpulse.com/inpulse_info/how_inpulse_works This product allows the use of 91 octane unleaded fuel in engines certified for 100 octane. Similar systems are available for automobiles for less than \$1000.00. Thank you for your attention in this matter.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0033

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Further Reading

NOTE: SEE EPA Particulate Matter PM2.5 comparison (image) showing combustion particle relative size, e.g. particulate matter less than <## 2.5µ (microns) for metals such as Tetraethyl Lead (TEL), almost thirty times smaller than human hair.

SEE Four Part Series: How Leaded Aviation Gasoline Is Poisoning a new Generation of Americans (html) 06-16-2022| Pulitzer Center.

- Do You Live Close Enough to a Small U.S. Airport to Have Lead Exposure? Check Our Maps (html)
- Leaded Airplane Fuel Is Poisoning a new Generation of American Children (html)
- 50 Years of Research Shows there is No Safe Level of Childhood Lead Exposure (html)
- Living with the Risks of Childhood Lead Exposure: A Day in the Life (html)

Also available from: Toxic Fuel AKA Avgas AKA 100LL Tetraethyl Lead (TEL) (html) — Quartz.

- Leaded airplane fuel is poisoning a new generation of Americans (html)
- Living with risks of childhood lead exposure: a day in the life (html)
- Do you live near enough to a small airport to have lead exposure? (html)
- Research finds there is no safe level of childhood lead exposure (html)

Getting the lead out — at long last (html) 09-23-2022 – Center for Public Integrity (home). The Environmental Protection Agency (US EPA) described the decision as “a major step forward” to safely phase out leaded aviation fuel, which contains a highly toxic additive known as Tetraethyl lead (TEL). Earlier this year, the EPA announced plans to issue a finding that would classify leaded aviation gasoline air pollution as a danger to public health and the environment, but even then, the process of enacting regulations could take years. Time is not on the side of children exposed daily to lead, which harms their developing brains and nervous systems. The Federal Aviation Administration (FAA) needs to start caring about kids with poison in their blood. They’ve been indifferent. They’ve been dragging their feet. They’ve been unresponsive, and it’s outrageous. That needs to change. It’s wrong that almost 6 million people — many children — are still exposed near airports to leaded fuel in this country.

Frontiers | Investigation of pollutant metals in road dust in a post-industrial city: Case study from Detroit, Michigan (html) (pdf) 09-22-2022 | Frontiers in Environmental Science (html). (DOI <https://doi.org/10.3389/fenvs.2022.974237>).

Lead in Air, Soil, and Blood: Pb Poisoning in a Changing World (html) (pdf) 08-02-2022 – PubMed Central (PMC) | National Center for Biotechnology Information (NCBI) | National Library of Medicine

(NLM) | National Institute of Health (NIH) | U.S. Department of Health & Human Services (HHS) | USA.gov.

Experimental Aircraft Association (EAA) AirVenture Oshkosh Fly-in & Convention: Lead in aviation fuel among topics at Oshkosh, Wisconsin fly-in (html) 07-28-2022 | Oshkosh Northwestern. Among the thousands of aviation enthusiasts at the Experimental Aircraft Association's AirVenture convention this week are a few who are discussing an [bold: oft frowned-upon topic] in the general aviation (GA) community: the environmental impacts of their activities. But the issue with general aviation (GA) aircraft isn't greenhouse gas emissions. It's lead emissions. Leaded fuel has been illegal in cars in the United States for decades. The U.S. Environmental Protection Agency has dropped the ball on stopping that in aviation. A 2021 study by the National Academies of Sciences, Engineering, and Medicine using EPA data from 2017 found that piston-engine general aviation aircraft accounted for about 70% of lead air emissions in the United States. Although the EPA has been looking into regulating airborne lead emissions from avgas since the 1990s, it wasn't until this year that the EPA announced it would review whether lead emissions from piston-engine aircraft threaten the health of those who live close to airports where these aircraft operate. "They're not doing anything revolutionary. They've been studying this issue for decades. Literally decades of studies and meetings." "Politics has become the controlling factor, not the technology." "You can't get a straight answer out of anybody as to how this is really supposed to work."

Airborne Lead Pollution and Infant Mortality (pdf) June 2022 | 9th IZA Workshop: Environment, Health and Labor Markets (html) | IZA Institute of Labor Economics. Environment, Health and Labor Markets: Session E (html) video at 30:21m – YouTube.

Improving Regulatory Science: A Case Study of the National Ambient Air Quality Standards (html) (pdf) January 2017: Supreme Court Economic Review (html) : Vol 24 | University of Chicago Press Journals (html). Explores the root of stalemate and acrimony all too present in the regulatory system today with analysis of a case study of the procedures for developing National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA), and attempt to identify procedural approaches that bring greater diversity (in data, expertise, experience, and accountability) into the decision process.

[Bold: Michigan Residents Exposed to More Industrial Contaminants Than Most States Making Michigan One of the Most Toxic Environmental Exposure Areas in Entire Nation. Witness the 'Slow-Motion Battle' to Protect ANY Michigan Residents, Especially from the Michigan Department of Transportation (MDOT)]

U-M researchers need 100,000 participants for massive study (html) 09-19-2022 | Detroit Free Press. From nonstick PFAS compounds to lead in water to soot and smog, [Bold: Michigan residents are exposed to more industrial contaminants than most states, and those contaminants are known to cause adverse health effects, including cancer]. But how much exposure, for how long, causes those illnesses? When do the warning signs arise, and how do changes occur over time? How do race, nutrition and other factors influence health outcomes? A critical window of susceptibility is pregnancy, for example. When a person is pregnant, are they differentially affected by environmental exposures? When a person becomes pregnant, we need to be able to understand the impact of exposures during that time.

MI-CARES: the Michigan Cancer and Research on the Environment Study | School of Public Health (SPH) | University of Michigan (UMich). Bold: Michiganders experience some of the most toxic environmental exposures in the nation]. Join MI-CARES to help understand how our environment is harming us. Let's take back our health!

With \$13M grant, U-M researchers will track cancer risk from environmental exposures (html) 10-20-2021 | University of Michigan News | Office of the Vice President for Communications | University of Michigan (UMich) | Regents of the University of Michigan. Heavy metals like lead [Tetraethyl Lead (TEL)], industrial pollution from steel mills, coal-fired power plants or oil refineries, "forever chemicals"

called PFAS that don't break down in the environment—how much are Michigan residents exposed to these environmental contaminants and what does this mean for their risk of developing cancer?

NOTE: this is just the “Tip of the Michigan POLLUTION Iceberg” when it comes to Tetraethyl Lead (TEL) & Ethylene Dibromide (EDB) contamination at up to 448 aviation sites in Michigan that continuously use Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) while the Michigan Department of Transportation (MDOT) has known for well over a decade and continues to acquiesce.

It's no longer the issue of the wrong-doing, what's done is done, it's MDOT's continued & concerted effort to acquiesce, conceal & cover-up, no public mention anywhere, no public effort to protect anyone in Michigan, a clear dereliction of duty to protect all residents of Michigan, complete unadulterated incompetence coupled with professional negligence & social indifference while the Transportation & Mobility industry including Aviation, Aerospace & Automobile / Truck related technologies move away from Michigan without massive incentives to re-locate or remain.

Issues of the Environment: Ann Arbor-based Ecology Center applies new methodology to detecting spread of toxic chemicals (html) 12-07-2022 | WEMU-FM. Michigan is in the top five states for diseases linked to air quality, racking up \$1.5 billion per year in excess health care costs, with [bold: Southeast Michigan having some of the most polluted air.]

The State of Michigan Does NOT warn or mention Toxic Dangers or Harms from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) in use at up to 448 Michigan Aviation Facilities or airstrips!

[See original document for additional appendices of input provided to US Congress & the National Academies, as well as additional references.]

Attachment 2 Matthew Grisius reference OAW EPA Michael Regan email 05-23-2022

Attachment 3 Matthew Grisius reference Friends of the Earth 04-04-2022

Attachment 4 Matthew Grisius reference EarthJustice 03-16-2022

Comment Number: EPA-HQ-OAR-2022_0389-0382-0001

Commenter Type: Private Citizen

Commenter: Galen Knight

Organization:

Excerpt Text:

[FL TEXT REMOVED] Toxic metals, including lead, that poison our vitaletheine modulators and humoral immunity, as well as sulfur biochemistry in mammalian bodies (Polonium ions being worse than carcinogenic nickel, a gold ions are worse than mercury ions, with Plutonium ions among the most toxic and carcinogenic substances known): <http://vitaltherapeutics.org/vtlrefab.htm> Grounding aviation alleviated aviation aerosols and soots that were causing 4 years of exceptional, extreme, and sever drought in a homogeneous orographic cloud regions that are destroyed by these at cruise altitude emissions through advection and difffluence of moisture out of the region:

<https://worldbeyondwar.org/wp-content/uploads/2019/07/impact.pdf>

<https://theconversation.com/us-military-is-a-bigger-polluter-than-as-many-as-140-countries-shrinking-this-war-machine-is-a-must-119269>

<https://articles.mercola.com/sites/articles/archive/2019/07/17/military-is-among-the-worst-polluters.aspx>

<https://www.rollingstone.com/politics/politics-features/oil-gas-fracking-radioactive-investigation-937389/>

<https://oehha.ca.gov/media/downloads/proposition-65/p65list010320.pdf>

(See "Shale-oils cancer" April 1, 1990 & "Soots, tars, and mineral oils untreated and mildly treated oils and used engine oils cancer" February 27, 1987)

<http://www.vitaletherapeutics.org/BLMProtest+.pdf>

<http://www.vitaletherapeutics.org/Health/Fracking.pdf>

<http://www.vitaletherapeutics.org/Health/Fracking.html>

<http://www.vitaletherapeutics.org/FrackingFluids/Chemicals.pdf>

<http://www.vitaletherapeutics.org/FrackingFluids/Chemicals.html>

<http://www.vitaletherapeutics.org/EPA/CommentsEPAHFShale2.pdf>

<http://www.vitaletherapeutics.org/Notice/NotePuPoFlare.pdf>

<http://www.vitaletherapeutics.org/GMO&Fracking/SuperDelegatePlea.pdf>

Response to Other Requests and Recommendations

Some commenters request or recommend that the EPA take a variety of actions regarding to aircraft, airports, or the regulation of aviation fuel. Some of these comments related these requests to concerns regarding lead, while others pointed to other underlying concerns.

Some comments request or recommend that the EPA take certain actions to manage or mitigate aircraft lead emissions. Some of these comments assert that a viable solution for managing aircraft engine lead emissions is to move run-up areas so that the Cone of Distinguishable Aviation Lead Emissions is within the fence line of airports. Some of these comments further assert that areas outside of the Cone of Distinguishable Aviation Lead Emissions would have lead levels indistinguishable from background levels. At least one commenter advocates for the EPA to consider implementation of strategies to mitigate detrimental public health consequences of lead emissions from aircraft, given that the finalized findings do not include standards to reduce emissions of lead. Other commenters recommended changes to general aviation aircraft operations (e.g., prohibiting touch-and-go activity in urban areas or establishing flight patterns for airports) or that airports be prohibited in residential areas.

In response, the EPA notes that these comments are not focused on the endangerment or cause or contribute findings that are the subject of this action. Rather, they confuse the straightforward scientific judgment about whether aircraft emissions of lead cause or contribute to lead air pollution by focusing on the management or mitigation of the lead air pollution or the emissions. Further, as described in Section III of the final notice for this action, in issuing these final findings, the EPA becomes subject to a duty under CAA section 231 regarding emission standards applicable to emissions of lead from aircraft engines, but the EPA is not proposing or promulgating any standards in this action. Additionally, the Agency has not proposed and is not finalizing any measures to manage or mitigate lead emissions from covered aircraft. Accordingly, to the extent these comments request or recommend approaches for such standards or measures, they are beyond the scope of this action and thus require no further response.

At least one commenter asserts that, in order to ensure strict standards on lead emissions reduce the harm to nearby communities, the EPA should conduct and support research to evaluate the health impact of leaded fuel on children and adults of different age groups who live or work at differing distances from airports where leaded fuels are used, and that the EPA should also conduct or support research to

determine the impact on children and adults living or working at various distances from airports where alternative fuels are used. The EPA responds that because this comment is directed to evaluating potential standards on lead emissions, it is beyond the scope of this action for the reasons explained in this section of this RTC document and thus requires no further response.

Commenters made a number of other requests for the EPA. Commenters request that the EPA measure lead in air, water, soil; conduct soil cleanup of soluble lead halides; measure noise in all neighborhoods within five miles of flight paths, paying special attention to flight training and recreational flying activities; and provide access to developmental and neuropsychological assessments. Some commenters requested that the EPA shut down specific airports, while another requested that an impact study be conducted for a particular airport. Commenters additionally request that all collected lead and noise data be posted online in real time by neighborhood and that by using this information, the EPA provide information online regarding how the public should prevent and mitigate harm from lead emissions and aircraft noise. Some comments request that the EPA require full and detailed disclosure of potential harm to person and property with each real estate transaction within five miles of flight paths. Other comments request posting an online public complaint resolution platform. In response, the EPA notes that these requests are beyond the scope of this action, as the EPA neither proposed, requested comment on, nor is finalizing any of these requested actions, and thus they require no further response.

Some comments raise concerns related to issues other than lead, such as concerns pertaining to aircraft noise, hydrocarbons and carbon monoxide, regulation of nitrogen oxides from covered aircraft, regulation of particulate pollution from commercial aircraft, or the EPA's severe designation for air quality in Denver (the comment does not specify for which pollutant). Many of these comments request that the EPA take action related to these concerns. Additionally, commenters request that the EPA require specific actions of the FAA. These comments and requests are also beyond the scope of this action and thus require no further response.

Comments requesting federally mandated requests for proposals under the Airport Cooperative Research Program are beyond the scope for this action, as are comments requesting that the EPA take the following steps: mandate that the 100ULL specification be the maximum allowable lead content, mandate that the FAA negotiate and pay for the G100UL STC if EAGLE does not have a solution by 2025, and mandate that the FAA fast-track and pay for certification of water-methanol anti-detonation system. Accordingly, these comments require no further response.

In response to requests for information regarding prevention of lead exposure and lead poisoning, the EPA notes that we have several resources available at <https://www.epa.gov/lead> regarding the prevention of lead poisoning in children related to the many different types of potential exposures to lead.

Some commenters request that the EPA, in coordination with the FAA, ensure that any final finding in this matter and follow-on regulatory actions does not invite or motivate State, local, Tribal, or territorial governments to attempt to restrict the dispensation of 100LL aviation gasoline, which the commenter states would be premature, unlawful, and preempted. The EPA responds that to the extent that this comment pertains to follow-on regulatory actions, it is beyond the scope of this action and requires no further response. With respect to the final findings, the EPA responds that while the Agency is endeavoring to communicate appropriately and clearly about these findings, the Agency cannot control what invitations or motivations third parties may draw from these final findings, nor what actions they may take. The EPA further notes that the actions of such third parties is beyond the scope of this action.

One commenter submitted a comment that provides a list of references related to lead, but the commenter neither describes what bearing these references have on this action nor explains what aspect of the proposal should be finalized differently based on these references. Another commenter submitted a comment that provides a list of websites and reference to toxic metals, but the commenter also did not describe what bearing these websites have on this action nor did the commenter explain what aspect of

the proposal should be finalized differently based on these references. Therefore, EPA considers these comments to not be adverse to this action and thus not requiring of a response.

In this section of the RTC, the EPA is focusing on comments related to certain other requests and recommendations from commenters. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, the Agency responds to comments regarding requests that the EPA ban leaded avgas in Section 7.3 of this RTC document; comments that lead concentrations in air do no harm and exceed the lead NAAQS at only a few airports in Section 6.2.2 of this document; comments related to assertions lead concentrations in air indistinguishable from background concentrations do not endanger public health in Section 6.2.3 of this document; and to comments regarding the endangerment finding in Section 5 of this document.

Section 8.2.4. Other Requests of the EPA Unrelated to Lead Emissions from Covered Aircraft

Comment Number: EPA-HQ-OAR-2022_0389-0673-0001

Commenter Type: Private Citizen

Commenter: Darlene Yaplee

Organization:

Excerpt Text:

The EPA is requested to end the use of leaded aviation now in support of the agency's mission to protect human health and the environment. The EPA must step up its proposal to reduce the oil and gas industry's methane pollution to ensure: Protection of our planet from the 2nd largest contributor to the climate crisis after carbon dioxide; National efforts to reduce environmental risks by following the best available scientific information underscoring the methane emissions issue; and Creation of federal laws to protect human health and the environment. Prompt action by the FAA is long overdue. Lead was banned from automobiles over 25 years ago. The EPA must complete its endangerment finding as soon as possible, and work with the Federal Aviation Administration to swiftly phase out leaded aviation fuel once and for all.

Comment Number: EPA-HQ-OAR-2022_0389-0544-0001

Commenter Type: Private Citizen

Commenter: David Bezanson

Organization:

Excerpt Text:

[FL TEXT REMOVED] Alternative biofuels have not been proven to have lower emissions of toxics and GHGs over the 3 Scope lifecycle than petrol jet fuel. Please decarbonize aviation via clean energy, e.g., battery electric, clean hydrogen, and blimps. Advance policies that decrease demand for air transit. [FL TEXT REMOVED] Sincerely, David Bezanson Santa Cruz, CA 95060

Comment Number: EPA-HQ-OAR-2022_0389-0634-0003

Commenter Type: Private Citizen

Commenter: Jessica Kuzmier

Organization:

Excerpt Text:

If possible, please pursue fuels that will mitigate air pollution as well as yield net negative carbon emissions, as air travel is one of the biggest culprits that lead to global warming.

Comment Number: EPA-HQ-OAR-2022_0389-0616-0001

Commenter Type: Private Citizen

Commenter: JOSEPH MAURER

Organization:

Excerpt Text:

We have enough contaminants raining down on the homes below with regularity from jets too and that should be addressed as well. If you look at our streets, sidewalks, buildings, bridges and other structures, where is all this filth that adheres to these structures coming from? It's coming from planes and jets. We need desperately to contain aviation pollution.

Comment Number: EPA-HQ-OAR-2022_0389-0366-0001

Commenter Type: Private Citizen

Commenter: Henry Morgen

Organization:

Excerpt Text:

[FL TEXT REMOVED] AND by the way, we need to transition to sustainable jet fuel as quickly as possible for the interim. The ultimate goal would be solar/battery powered electric planes for short to medium haul requirements and sustainably-generated hydrogen fuel for longer flights. Sincerely, Henry Morgen Los Angeles, CA 90019

Comment Number: EPA-HQ-OAR-2022-0389-0190-0001

Commenter Type: Private Citizen

Commenter: Mary Vierling

Organization:

Excerpt Text:

Regarding the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare, I believe there is a contributing factor to this air pollution at a Metropolitan Airports Commission (MAC) airport, Lake Elmo, 21D, in Baytown Township Minnesota. The MAC is in the process of expanding two runways at Lake Elmo and as part of the project, is incorporating 4 evaporators (Apex 2.0) to control storm water off their impervious surfaces.

These evaporators have never been used in the upper Midwest much less to control storm water at an airport with many ground/stormwater pollutants. Pollutants that we know of today are PFAS, TCE, Deicer, Ag chemicals just to name a few.

This airport also sells jet fuel and has a 5000 gallon diesel tank on site, neither of which has a containment dike on site and there is no method to control spillage. When I contact my state and local agencies, they state that it doesn't fall under their jurisdiction or there is no law on the books declaring it illegal. How can there not be a law adding to air pollution? Who do I need to contact to get these issues investigated? No agency will challenge the MAC in Minnesota including the legislature that created them.

Information on the Apex 2.0 evaporators can be found at: <https://www.resourcewest.com/apex-2/>

Lake Elmo Airport is surrounded by housing on all four sides. Housing is within feet of these evaporators.

Response to Other Requests of the EPA Unrelated to Lead Emissions From Covered Aircraft

Some commenters raise issues and provide recommendations regarding topics that are not related to lead emissions from covered aircraft.

Commenters submitted comments expressing their concerns or views regarding climate change; an EPA proposal to reduce the oil and gas industry's methane pollution; alternative biofuels; decarbonization of aviation; a request that the Agency pursue alternative fuels that yield net negative carbon emissions; support for transitioning to sustainable jet fuel in the interim, and solar/battery powered electric planes for short to medium haul requirements and sustainably-generated hydrogen fuel for longer flights; the installation of evaporators at a specific airport; and aviation pollution in general. These comments are beyond the scope of this action and require no further response.

Section 8.3. Comments Concerning FAA

Comment Number: EPA-HQ-OAR-2022-0389-0144-0004

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

The FAA has known for decades that lead is toxic yet has done nothing substantive to address the problem. Now this agency wants to delay the banning of this fuel for years to come, at least until 2030 and possibly longer. While people die and others suffer the potentially irreversible consequences of lead, the FAA continues to maintain that high octane leaded fuel is necessary to protect the safety of pilots.

So who are the pilots the FAA so zealously defends while putting the rest of the population at greater risk of death, miscarriages, diminished IQs, ADHD, kidney disease, reproductive problems, conduct disorder, delinquency, increased violence and a multitude of other life-long health, economic, and societal problems? A review of FAA Civil Airmen Statistics for 2021 reveals that there are 720,650 pilots—less than one-quarter of one percent of the entire population—certified to fly piston-engine aircraft in this country. Ninety-one percent are men, the overwhelming majority of whom are white. Over 20%, 161,459 are private pilots who have the financial wherewithal to own or lease private airplanes or fly as recreational hobbyists. More than one-third, 250,197, are student pilots, many of whom are recruited from overseas. These are the people who are collectively responsible for emitting 470 tons or more of lead into the air every single year.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

EPA must act to ban leaded aviation gasoline as part of a holistic solution to finish the fight against childhood lead poisoning. We strongly recommend EPA finalize the proposed endangerment finding as

soon as possible and work with the Federal Aviation Administration (FAA) to phase out lead aviation gasoline. To that end, we also support the language in the recently adopted Fiscal Year 2023 Omnibus, which directs the FAA to prioritize the identification and testing of unleaded replacement fuels that are viable and to move forward expeditiously on a rulemaking triggered by EPA’s endangerment finding.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0009

Commenter Type: Advocacy Organization

Commenter: Nathan Park

Organization: Earthjustice

Excerpt Text:

Finalizing this endangerment finding alone while important does not stop communities from breathing lead in the air. We are glad to see FAA approve an unleaded alternative for the entire general aviation fleet earlier this year, yet the FAA has proposed a 2030 phase out of leaded aviation fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0004

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The FAA has exclusive jurisdiction over aircraft fuel under 49 U.S.C. [Section] 44714 (“Aviation fuel standards”), which authorizes the FAA Administrator to prescribe:

-standards for the composition or chemical or physical properties of an aircraft fuel or fuel additive to control or eliminate aircraft emissions the Administrator of the Environmental Protection Agency decides under section 231 of the Clean Air Act (42 .S.C. 7571) endanger the public health or welfare; and
-regulations providing for carrying out and enforcing those standards. 49 U.S.C. [Section] 44714.

As the agency responsible for overseeing aircraft and aircraft engine safety, the FAA has an important role to play with respect to aircraft fuels and emissions standards related to the use of those fuels. The FAA manages aircraft safety through a system of type certificates, which cover a range of important airworthiness and safety items, including both noise and fuel. In short, a type certificate covers and indicates FAA approval of the aircraft’s design and technical features, including which fuel that aircraft may use. For example, an aircraft not approved for 94UL fuel may not use it, and misfuelling an aircraft can result in significant performance and catastrophic safety issues. Once the EPA sets the aircraft engine emissions standard, FAA would then be required to prescribe regulations to ensure compliance with these emissions standards under CAA [Section] 232 and trigger the FAA’s statutory mandate under 49 U.S.C. [Section] 44714 to prescribe standards for the composition or chemical or physical properties of aircraft fuel or fuel additive to control or eliminate aircraft emissions. Notably, the CAA’s section 232 also gives the FAA— and not the EPA—primary authority for enforcing aircraft engine emissions standards EPA adopted under CAA Section 231. 42 U.S. Code [Section] 7572(a).

Comment Number: EPA-HQ-OAR-2022-0389-0227-0005

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The general aviation industry remains firm in our collective support to remove lead from aviation gasoline and our position that any transition from leaded to unleaded gasoline must be effectuated with safety as the highest priority. The industry and the FAA have been working on this unleaded transition for many years. Congress has allocated more than \$57 million to test and evaluate candidate fuels through the Piston Aviation Fuels Initiative (PAFI) program.

In 2010, the General Aviation Coalition of associations submitted comments on the importance of scientific data being available for EPA to make a determination and propose whether an endangerment finding with respect to lead emissions was reasonable based on what was then available. [Footnote 9: Comments of the General Aviation Avgas Coalition on the Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline, Dkt. No. EPA-HQ-OAR-2007- 0294.] We believe that it is in the public interest to eliminate lead from aviation gasoline. In our 2010 comments, we advised the EPA that “[t]here is no demonstrated unleaded replacement for 100LL avgas that meets the safety and operational requirements of the entire fleet.” [Footnote 10: *Id.* at 5.] In the intervening years, work toward development of such an unleaded replacement that meets the safety performance needs of the U.S. fleet of piston aircraft and FAA regulatory safety requirements has continued apace. And now, in 2022, potential high- octane unleaded replacement fuels are coming into frame, strongly supported by a collaborative industry/government initiative not only to facilitate development and deployment of a safe and market viable unleaded aviation fuel but also to eliminate lead emissions by December 31, 2030.

In an exhaustive 2021 report to the FAA on options for reducing aviation lead emissions, the National Academies of Sciences, Engineering, and Medicine recommended that the “FAA should continue to collaborate with the [general aviation] industry, aircraft users, airports, and fuel suppliers in the search for and deployment of an acceptable and universally usable unleaded replacement fuel,” urging a “holistic process” to develop and deploy such a fuel. [Footnote 11: Options for Reducing Lead Emissions from Piston-Engine Aircraft, Nat’l Academies of Sciences, Engineering, and Medicine (2021), recs. 6.1-6.2, at <https://doi.org/10.17226/26050/>.] Only through a government-industry effort that would involve the private sector, the FAA, and Congress could the aviation system eliminate lead emissions.

We agree with that conclusion, and accordingly the FAA, the Coalition, and other aviation stakeholders have launched a public-private initiative titled “General Aviation Commitment to Eliminate Aviation Gasoline Lead Emissions,” or “EAGLE,” [Footnote 12: Appendix B provides an overview of the EAGLE initiative framework.] which intends to achieve its firm goal—elimination of lead emissions from general aviation aircraft by the end of 2030, or sooner if possible — through development and deployment of a viable high-octane unleaded replacement aviation gasoline that can be safely operated by the U.S. fleet with minimum impact. EAGLE’s work continues apace, and more information on the initiative is available at www.faa.gov/unleaded.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

In addition, I ask that the federal government empower local governments to protect their constituents from lead by terminating FAA grant assurance obligations and by placing stringent requirements on the FAA to expedite the process of eliminating leaded aviation fuel once and for all. The time for action is now.

Comment Number: EPA-HQ-OAR-2022-0389-0145-0002

Commenter Type: Trade Association

Commenter: Jim Coon

Organization: General Aviation Manufacturers Association, et al.

Excerpt Text:

We, the industry, believe it is vital that the FAA be given the resources needed to expedite testing, validation, and demonstrations for all FAA STC-authorized and potential unleaded fuel solutions. As I mentioned earlier, any transition to a fully unleaded solution is one that needs to be done safely and smartly.

Comment Number: EPA-HQ-OAR-2022-0389-0144-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Oregon Aviation Watch

Excerpt Text:

Only the most depraved of human societies would require local governments to intentionally poison their own residents by forcing airports to sell and store leaded aviation fuel despite extensive evidence that there is no safe blood lead level in children or adults. Sadly, this is the very predicament communities across the nation are now facing. FAA grant assurance agreements requiring airport owners and government entities to degrade the environment while seriously compromising the health of local residents are Faustian bargains that might well cause the devil himself to blush.

The irony is that the money doled out by the FAA to GA airports is derived in large part from fees affixed to commercial airline passenger tickets. The vast majority of people who contribute to this fund do not even use general aviation airports.

Comment Number: EPA-HQ-OAR-2022-0389-0141-0004

Commenter Type: Private Citizen

Commenter: Alan Levenson

Organization:

Excerpt Text:

The FAA must ramp up their testing and the industry must commit to making the switch. The children need more than lip service. They need regulations to protect them.

Comment Number: EPA-HQ-OAR-2022_0389-0769-0001

Commenter Type: Private Citizen

Commenter: Lori Shepler

Organization:

Excerpt Text:

Many in the general aviation industry keep bringing up the safety issue to me if leaded fuel is banned now. I wanted to get the facts, so I asked the experts with GAMI. Here's what they told me. Their fuel has been extensively vetted by multiple independent sources and no safety issues have been observed. The octane performance of GAMI adequately meets or exceeds that of 100LL at normal cruise mixtures and GREATLY exceeds 100LL performance at full power and take off. All piston engine aircraft using leaded fuel can operate at full rated power on GAMI fuel and there is no portion of aircraft that will still need to use a leaded fuel. The FAA and AOPA should be focused on the production and distribution of this unleaded fuel so that all these airports get it within a year or less. The FAA's date of banning these lead emissions in 2030 is unacceptable.

Comment Number: EPA-HQ-OAR-2022_0389-0703-0003

Commenter Type: Aircraft Owner/Operator

Commenter: Geoffrey Swain

Organization:

Excerpt Text:

Organized aviation groups frequently note that only 30% of piston-engine planes are of the high-performance variety that require high-octane fuel (for which lead-containing "100LL" is the only current alternative). And because these high-performance planes fly many more hours overall and burn fuel at a higher gallons-per-hour rate compared to their lower-performance brethren, they likely account for about 70% of all aviation-related lead emissions across the US annually. At first glance, this makes it appear less impactful to focus on the 70% of the fleet that are lower-performance planes. However, the planes that tend to spend the most time at low altitudes near their home airports are disproportionately lower-performance planes that could be converted to unleaded fuel in a matter of months. Therefore, we could likely reduce aviation-related lead emissions in the vicinity of any particular airport by about 50% within a year, simply by a) providing an unleaded alternative for sale there (in addition to 100LL for those planes that have no other fuel choice now), and b) providing the right mix of incentives and requirements for qualifying lower-performance planes to choose and use existing unleaded alternative fuel now. The first step in that process is to make UL94 or ethanol-free mogas available to as many planes as possible. One approach to that would be to require all fixed-base operators at the nation's busiest general aviation airports to sell an unleaded aviation fuel option as a condition for being able to continue to sell leaded fuel. The second step is to assure that each plane that qualifies for currently available unleaded fuel get the required "Supplemental Type Certificate" (STC) that is required to legally use that fuel. This may necessitate some combination of incentives and requirements for owners to complete the STC process within a reasonable timeframe. A much more efficient approach would be for the FAA to provide a "blanket STC" for all qualifying aircraft. That would obviate the time-consuming, one-STC-at-a-time process currently required for each individual airplane, and would in fact make it possible for qualifying planes to begin using available unleaded fuel NOW. In addition, because planes with an STC for UL94 or mogas can still burn 100LL, it may also be important to provide some level of price subsidy in the short term so that the pump price of available unleaded alternative does not exceed that of its leaded counterpart - - otherwise, pilots may choose to fill up with the cheaper, leaded alternative. Creating legal requirements for STC'd planes to use unleaded fuel when available may be another reasonable regulatory approach. In conclusion, we should not ban sales of leaded avgas at any local airport before a fleetwide unleaded alternative is available, because it will likely actually result in increased lead emissions, not only at that particular airport, but also at nearby airports, as planes fly further to get the fuel they require. Instead, we should act now to assure the availability of both 100LL and a currently-available unleaded

alternative at all busy airports, and we should provide the necessary combination of incentives and requirements to transition the lower-performance 70% of the piston aircraft fleet to currently-available unleaded fuel as soon as possible. I hope this is helpful, and I remain available to discuss this important topic further.

Comment Number: EPA-HQ-OAR-2022_0389-0662-0001

Commenter Type: Private Citizen

Commenter: JDB

Organization:

Excerpt Text:

CSA offers a commonsense solution which can be implemented almost immediately and is both safe and cost effective. I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0650-0006

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

o If Congress intended for EPA to regulate aircraft, they would have included that authority in the Clean Air Act. Only an act of Congress can change the Clean Air Act. o The proposed rule appears to be classic overreach by EPA. The Supreme Court recently ruled on regulatory overreach on the part of EPA when sued by the State of West Virginia. https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf o I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed. o I agree with common sense solution proposed by the Coalition for Sustainable Aviation (CSA) and am encouraging the FAA to implement the proposed solution.

Comment Number: EPA-HQ-OAR-2022_0389-0642-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The FAA has a partnership to get rid of lead-based fuel known as Avgas by 2030, but why don't they want to control the situation sooner? If jet engines that do commercial flights run off a fuel that doesn't have lead, why do piston-engine aircrafts still primarily use the Avgas?

Comment Number: EPA-HQ-OAR-2022_0389-0543-0001

Commenter Type: Local Government

Commenter:

Organization: Town Village Aircraft Safety Noise Abatement Committee. TVASNAC. Town of Hempstead New York.

Excerpt Text:

As a member of TVASNAC we constantly write letters to the FAA about the problems of low flying

aircraft and noise and abatement. There is also a real problem with the health issues with the air that we breath here in the Town of Hempstead. The FAA is Terrible they never responded to our concerns.

Comment Number: EPA-HQ-OAR-2022_0389-0619-0001

Commenter Type: Private Citizen

Commenter: Patricia Ziegler

Organization:

Excerpt Text:

Will the FAA listen to the EPA? To science itself? To anyone or thing besides the airlines that line their pockets with bribes?

Comment Number: EPA-HQ-OAR-2022-0389-0194-0015

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Taxpayers Have Provided “Benefit of the Doubt” Way Too Long

Tetraethyl Lead (TEL) contamination & poisoning has gone way beyond the mere hint or slight appearance of impropriety with seemingly apparent & rampant dysfunction and “Burrowing In” at Local, County, State and Federal Levels plus the complete lack of and total disregard for any concrete Human protections anywhere. While related shortcomings or problems do NOT appear to be:

- Limited amounts of money, time, number of really smart people or any other resources
- Limited amounts of technological, scientific or medical data, information, evidence, knowledge, understanding, experience, expertise, wisdom, informed decisions, etc.

It’s the same results, same pre-determined outcomes, for decades, via the same combined Kangaroo Court while a hamstrung Taxpaying Public is completely defenseless & ineffective against:

- Coordinated multi-pronged, multi-faceted, multi-industry effort with unlimited budgets, complete with Special Interest & Industry Lobbyists with Media Fan-clubs and Cheerleaders
- Single mission, Single goal: Preserve Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) [bold: availability] at any cost (Human or monetary)
- Single Tradeoff: Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) vs Millions of Human Families, Pregnant Moms, Babies, School Children & Elderly
- NO basic checks & balances, NO over-arching guard-rails or safe-guards, NO audit-trail or Transparency anywhere

[Bold: Taxpayers Demand Department of Transportation (DOT) Office of Inspector General (OIG), the Federal Aviation Administration (FAA) Office of Audit and Evaluation (AAE) and the Government Accountability Office (GAO) Intervention to Address the Appearance of Impropriety: Rampant Potential Conflicts of Interest, Special Interest & Industry Lobbyist Collusion & Influence Peddling, Health, Safety & Welfare Rights Violations, Lack of Transparency, Safeguards, Audits, etc.]

Now IS the right time for Yet Another U.S. Government Accountability Office (GAO) investigation to explore any potential FAA opportunities present in this apparent chaos. Usually in the midst of chaos, there is also opportunity, Taxpayers need Objective Evaluation of these Chaotic opportunities NOW more than EVER. The Health, Safety & Welfare topics have been completely lost and ARE completely Out of Sight and Out of Control under Special Interest & Industry Lobbyists spells, whims & marketing budgets.

Taxpayers demand Congress issue a Federal MANDATE to conduct GAO 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) Transition Full Investigation to remedy this debacle IMMEDIATELY.

The U.S. Government Accountability Office (GAO) historically has been a watchdog agency, the guardian of Taxpayer Dollars, that answers difficult, complex convoluted questions through objective fact finding using stringent methodologies and unbiased investigative techniques. The GAO supports Congress in meeting its constitutional responsibilities and helps improve the performance and accountability of the federal government for the benefit of the [bold: American People].

The GAO is:

- known as the "investigative arm of Congress" and "congressional watchdog"
- legislative branch government agency that provides auditing, evaluative, and investigative services for the United States Congress
- supreme audit institution of the federal government of the United States

The Department of Transportation (DOT) Office of Inspector General (OIG) has responsibility to promote efficiency and effectiveness and to prevent and detect waste and abuse in departmental programs and operations. OIG does this through independent and objective audits and investigations. OIG also consults with the Congress about programs in progress and proposed new laws and regulations.

The Federal Aviation Administration (FAA) Office of Audit and Evaluation (AAE) is a staff office that reports directly to the FAA Administrator and provides an independent venue for the conduct or oversight of objective, impartial investigations and evaluations. The AAE is the FAA focal point for public and FAA employee reports related to:

- aviation safety violations
- waste, fraud, abuse and mismanagement
- internal FAA rule or policy violations
- whistleblower disclosures

The AAE also serves as the FAA liaison for DOT Office of Inspector General (OIG), Government Accountability Office (GAO), and Office of U.S. Special Counsel (OSC) audits and investigations involving FAA organizations and programs. AAE ensures that FAA response to these audits and investigations are thorough, ensure that corrective actions identified as a result of audits and investigations are implemented.

Way Too Much Human Capital at Stake to Let Others Gamble With

There is way too much Human Capital at [italics: stake], e.g. millions of expendable Human “Guinea Pigs”, “Cannon Fodder” and “Collateral Damage”, whole Families including Pregnant Moms, Babies, School Children & Elderly for the sake of literally a handful of “Elite Users”. Here is mere sampling, a non- exhaustive history, a seemingly almost abysmal record of ONLY the public shortfalls, gaps and threats that Taxpayers are allowed to see in a complex chaotic biased mélange of FAA, EPA, Special Interest & Lobbyist agendas that cannot be counted on to objectively perform, produce results or protect Taxpayers in any fashion in any reasonable timeframe at this late juncture:

-Transforming Aviation: Stakeholders Identified Issues to Address for 'Advanced Air Mobility' (html) (pdf) 05-09-2022 | U.S. GAO. Thirty-six stakeholders GAO interviewed described a number of issues that will need to be addressed by industry and the federal government before Advanced Air Mobility (AAM) operations can be widely implemented. NOTE: FAA should immediately factor in NASA RAM studies and recommendations previously mentioned.

-Aircraft Noise: FAA Could Improve Outreach Through Enhanced Noise Metrics, Communication, and Support to Communities (html) (pdf) 09-28-2021 | U.S. GAO. FAA combines the intensity and duration of noise and the number of flights overhead on an average day to quantify the noise at locations under a new flight path. We found this approach doesn't provide a clear view of what communities may

experience. For example, [bold: one loud] flight has the [bold: same] predicted effect as [bold: 100 quieter flights].

-Aviation Certification: FAA Needs to Strengthen Its Design Review Process for Small Airplanes (html) (pdf) 11-16-2020 | U.S. GAO. In 2016, the FAA shifted from prescriptive design requirements to performance-based safety regulations—specifying results but not prescribing methods to achieve them. But, the FAA [bold: hasn't developed] performance measures for the revised regulations [bold: or a plan to do so].

-Aviation Safety: FAA's Office of Aviation Safety Should Take Additional Actions to Ensure Its Workforce Has Needed Skills (html) (pdf) 11-09-2020 | U.S. GAO. FAA doesn't regularly assess these workforces to find the areas where needed skills are lacking.

-Aviation Safety: Actions Needed to Evaluate Changes to FAA's Enforcement Policy on Safety Standards (html) (pdf) 08-18-2020 | U.S. GAO. FAA changed how it enforces safety standards in 2015. FAA has not assessed whether the new policy is improving safety.

-Aviation: FAA Needs to Better Prevent, Detect, and Respond to Fraud and Abuse Risks in Aircraft Registration (html) (pdf) 03-25-2020 | U.S. GAO. FAA generally relies on self-certification and doesn't verify key information such as applicant identity or aircraft ownership. Shell company or limited liability company ownership can also make it difficult to determine who ultimately (beneficial owner) owns an aircraft. We made 15 recommendations, including that FAA verify key owner information. No improvements have been implemented.

-Airports: Information on Prices for Aviation Services and FAA's Oversight of Grant Requirements (html) (pdf) 11-26-2019 | U.S. GAO. At busy airports, aviation fuel prices were higher when there was less competition between service providers, in particular where there was only one provider. However, not all airports have enough demand to support multiple providers. While FAA oversees airport grantees, it does not regulate these prices.

-AOPA: GAO audit of FBO pricing misses the mark (html) 12-31-2019 – Aircraft Owners and Pilots Association (AOPA). After more than a year of investigation, the Government Accountability Office (GAO) released its congressionally mandated report on FBO pricing and FAA oversight of requirements airports must follow to obtain federal grants for airside safety project improvements. Audit report skims over other charges pilots could potentially incur, including ramp, tiedown, security, facility, infrastructure, and access fees. It appears that the GAO did little in this area because these fees are difficult to discover, there is no reason all FBOs fees shouldn't be transparent, not just fuel prices. According to FBO staff fees for services other than fueling can be lengthy and unwieldy to post on their websites for multiple reasons. Federal Airport Improvement Program (AIP), airports receiving grants [AKA "Aviation Welfare"] are obligated to charge "fair, reasonable, and non-discriminatory fees and prices. The House Transportation and Infrastructure Committee, asked the GAO to review FBO prices, transparency and FAA's oversight of grant assurances to airports, totaling more than [bold, italics: \$37 billion since 2007].

-GAO Investigating FAA Oversight of FBOs (html) 10-26-2019| AINonline. GAO is investigating the FAA's oversight of FBOs to ascertain if they are conducting their businesses in accordance with or in violation of federal requirements. Aircraft Owners and Pilots Association (AOPA) claims the investigation will examine how well the FAA is exercising its responsibility to oversee airports that receive Airport Improvement Program funds and the assurances that come with the grants, including the requirement that airports and businesses on them must charge only "fair, reasonable, and nondiscriminatory fees and prices." Over the past two years, AOPA has been asserting that FBO pricing is often unfair. National Air Transportation Association (NATA) claims attention is focused on the small minority—often large-chain FBOs with a monopoly position at an airport. Typical industry infighting and finger pointing Taxpayers are usually unaware of.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0016

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[bold: Zero Sense of Urgency So Conduct Yet Another Study: ACRP 03-73 [Pending] Airport Guide for Transitioning to Unleaded Aviation Gasoline for Seemingly Endless Ad Hoc Planning Purposes]

Again, as mentioned previously, there are NO real plans or real actions to clean up or address any real meaningful Public agenda to be found anywhere, just barreling ahead with plans to pump more highly profitable dirty fuels such as Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) for years to come, until 2030 or sooner, right? However, there is yet still another year, a whole twelve months to spare to do yet another study. Those pregnant moms, babies, school children & elderly can wait just a tad longer, or until 2030 or sooner, right?

The Airport Cooperative Research Program (ACRP) promoted, sponsored & championed by the Transportation Research Board Cooperative Research Programs (TRBCRP) | Transportation Research Board (TRB) | National Academies (NA) Sciences (NAS), Engineering (NAE), Medicine (NAM) sent Request for Proposal (RFP) to conduct research lasting: 365 days | 1 Year | 12 months:

ACRP 03-73: [Pending] Airport Guide for Transitioning to Unleaded Aviation Gasoline (html)

Funds: \$500,000

Contract Time: 12 months

Staff Responsibility: Joe Navarrete (jnavarrete@nas.edu), Senior Program Officer, 1-202-334 1649

Effective Date: UNKNOWN 2023

Completion Date: UNKNOWN 2023 / 2024

Background: The U.S. Environmental Protection Agency (EPA) has announced a proposed determination that emissions of lead from aircraft that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. The Federal Aviation Administration (FAA) and the aviation industry have set a goal and made a commitment to [bold: eliminate] the use of leaded aviation gasoline (AvGas) by the [bold: end of 2030] without [bold: adversely affecting the safe and efficient operation of the existing piston-engine fleet]. Achieving this goal will require airports [bold: to play a significant role], namely, taking steps to accommodate and offer unleaded AvGas [bold: while maintaining] octane [sp] low-lead (100LL) availability].

Objective: The final deliverables will include: a 10-15 page Primer; Guide; Tools and resources; Final report documenting the entire research effort and results; Technical memo titled, "Implementation of Research Findings and Products"; Summary of Key Findings; and Further Recommended Research Memo.

Status: Proposals have been received in response to the RFP. The project panel will meet to select a contractor to perform the work.

More ridiculous non-sequitur statements:

-More boiler-plate non-sense requirement "[bold: without adversely affecting the safe] and efficient operation of the so-called existing piston-engine fleet", all while [bold: continued operations] are "Status Quo". Hopefully nobody's weekend getaway, vacation or Fly-in Picnic, Barbecue or another Social Event might be inconveniently interrupted.

-Instead of asking anyone to "Play a Significant Role" to achieve ANY so-called goal Federal MANDATES are required for immediate action otherwise NOTHING will continue to happen all at glacial speed, for the next 8 years until 2030 or sooner, right?

Comment Number: EPA-HQ-OAR-2022-0389-0196-0006

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

If the goal is to reduce the threat posed by lead pollution, implementing the following might help. 1 Declare the FAA 1500 hour rule null and void. A typical training aircraft will use 8 gallons of leaded fuel per hour. 1500 hours of flight training will use 12,000 gallons of leaded fuel, while dumping a little over 56 pounds of lead per each pilot trained. It is estimated that the number of new pilots needed per year for the next ten years is 18,100 per year. 1,013,600 pounds of lead will be dumped into the environment per year, every year, for the next ten years “ just to train new pilots” under the 1500 hour rule. Did the FAA conduct an impact evaluation before enacting the rule? Under the previous 250 hour rule, one sixth of the million plus pounds of lead would have been dumped into the environment per year to train the same number of pilots. A reduction of 422 tons of lead per year, or a reduction of 4,220 tons of lead for 10 years could be realized simply by eliminating the 1500 hour rule. 2 Require the FAA to address the particulate pollution, (see attachment 2) noise pollution and possible wildfires caused by deteriorating mufflers. The FAA may recommend inspection of the outside of the muffler for leaks but they completely ignore the flame cones and baffles which should be inspected inside the muffler. A flame cone performs a function similar to a spark arrestor on a chain saw. A deteriorating muffler might possibly cause a wildfire when overheated pieces of metal from inside the muffler are expelled by a backfire or an after fire. Is there a correlation between the number of small planes in an area and the number of unexplained wildfires? The EPA could require the inspection of mufflers in wildfire prone areas. Lead pollution may also attach to the particulate.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0007

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-Swift Fuels endorses the current process legislated by Congress for EPA and FAA to work in tandem to assess and evaluate the proper legal pathway in order that the FAA administrator can ultimately call for regulatory action on the lead issue. This is an understandably tedious process and requires appropriate due diligence and a balanced approach by all parties to evaluate the commercial / operational tradeoffs impacting flight safety and its impact on human health – including pilots, OEM’s, and those stakeholders living in communities served by airports. This future FAA regulatory action is further complicated by uncertainties impacting the intermixability of new candidate fuels with known characteristics that may impact flight safety.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0002

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-Swift Fuels has collaborated with the FAA over the past 9+ years working on the certification of unleaded avgas fuels with the Wichita Aircraft Certification Office (ACO), the Piston Aviation Fuels Initiative (PAFI) and Fuels Certification Office in Washington DC, and our regional Chicago ACO.

-Swift Fuels architected the original FAA (STC/AML) certification program for UL94 unleaded avgas in 2014 and subsequently completed over 7+ years as the sole producer and nationwide provider of the only commercially available unleaded avgas sold across the US, which is now FAA-approved for over 70% of the GA piston-powered fleet.

-Swift Fuels led the ASTM International task force responsible for UL94 and achieved unanimous consent for ASTM fuel specification D7547. UL94 using D7547 has since been endorsed by major OEM's including Lycoming, Continental, Rotax, Textron Aviation (Beechcraft/Cessna), Robinson Helicopter, et.al.

-Swift Fuels architected a semi-automated avgas STC deployment program for pilots and aircraft owners which includes approved engine and airframe placards, aircraft flight manual supplements, and importantly the automation of forms and streamlining of approvals which call for the FAA to doublecheck the airframe/engine approvals for added pilot safety and to help prevent misfuelling errors – part of our Safe and Smart campaign for deploying unleaded avgas.

-Swift Fuels is actively managing another comprehensive FAA (STC/AML) certification program to [bold: fully replace 100LL] (leaded) avgas which incorporates the minimum requirements of the federal aviation regulations (FAR's), plus learnings from PAFI protocols, original equipment manufacturers (OEM) insights, and industry best practices in direct collaboration with FAA using our 100-octane aviation gasoline (called "100R"). This is being accomplished in parallel with our global industry task force activities for the adjudication of an ASTM International fuel specification. Swift Fuels believes that no qualified fuel may enter the US marketplace without proper FAA-certification, [underlined: and] a formal ASTM fuel specification, [underlined: and] the endorsement of aerospace OEMs to reinforce the risk-assurance and quality of the entire fuel certification program and the aviation fuel supply chain.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0006

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

9) Neither NMC Trustees, NMC management, Cherry Capitol Airport management, or FAA representatives have contested the germane facts, the essential ones of which have been presented to them and numerous others in written communications, as described below.

10) NMC Trustees and management have indicated that they are entitled to operate the NMC flight school in the manner that they do and have – as documented in their written communication with me, implicitly messaging that NMC flight school program objectives override child, public and environmental health and welfare.

Lead Emissions and Exposures Associated with Northwestern Michigan College's Flight School Operations

I became aware in March of 2021 of a potential serious source of environmental and public health aviation-related degradation not only in my Oakwood Addition neighborhood, in Traverse City, Michigan, but in other neighborhoods adjoining or near the Cherry Capitol Airport. This awareness developed as a result of my initial curiosity and interest in NMC flight school noise in the community related to NMC's flight school's touch-and-go operations. My research led me to understand and conclude that NMC flight school noise is a good proxy for NMC flight school lead emissions over these same neighborhoods. And this is likely true for many if not most of the approximately 1000 flight schools operating today in the U.S. that rely on leaded aviation gas. This degradation results from nanometer-sized lead particulates emitted by NMC flight school piston-engine aircraft, ongoing for nearly a half century, after starting in 1967, and presently ongoing, unless something has changed in the past few months, which is unlikely, but not impossible.

My understanding is that the FAA, Cherry Capitol Airport and NMC chose to not inform, for over a half century, a single member of the impacted Traverse City area public concerning these lead particulate exposures. I have no information that would indicate that they have recently changed anything in that regard.

The fine-particle nature of lead released from piston-engine aircraft operations has been described by J.D. Griffith (Electron microscopic characterization of exhaust particles containing lead dibromide beads expelled from aircraft burning leaded gasoline, Atmospheric Pollution Research 11 (2020) 1481–1486). These extremely small lead particles, considerably smaller than the lead particulates associated with automotive combustion of leaded gasoline, are especially problematic for children due to their relatively high rate of respiration, and the relative ease with which such small particles, once inhaled, can enter their bloodstreams, brain, organs and bones.

Lead is a very dense substance and there is every reason to anticipate that once released into the atmosphere as particulate matter, it will settle out relatively quickly, as compared to being transported far away by dispersion and other atmospheric transport processes. This is especially anticipated due to the relatively low altitude of the touch-and-go flight patterns.

This willful history of lead particulate emissions over vulnerable Traverse City neighborhoods by NMC, coupled with NMC's willful inaction to notify the community about the emissions and exposures, are part of NMC's legacy. It is also a part of the FAA's legacy, as the FAA allows the lead emissions and exposures and does not and has not stipulated public notification thereof, and has gone a step further, approving NMC's flight training school (according to NMC). Finally, these surreptitious, invisible, tasteless, odorless lead emissions and the associated exposures are part of the following individuals' records: FAA Regional Administrator Rebecca MacPherson, NMC Aviation Program Director Alex Bloye, NMC President Nick Nissley, NMC Trustees Rachel A. Johnson, Laura J. Oblinger, Kenneth E. Warner, Andrew K. Robitshek, Douglas S. Bishop, Chris M. Bott, Kennard R. Weaver, and Cherry Capitol Airport Director Kevin Klein. It is also part of their predecessors' records.

It is worth noting that the FAA has traditionally had and continues to have a very accommodating attitude concerning piston-engine aircraft aircraft noise and this matter offers no exception. Since piston-engine aircraft noise is a proxy for the known and knowing dispersal of lead particulate contamination and the consequent human exposure, it should be understood by all that NMC has, through its adoption of touch-and-go routes, determined that the environmental and public health and welfare in certain neighborhoods in the Traverse City area will be degraded by and for the benefit of NMC and its flight school, under the approving and watchful eyes of the FAA, FAA Air Traffic Control, and the Cherry Capitol Airport, as NMC is its client.

Comment Number: EPA-HQ-OAR-2022-0389-0239-0004

Commenter Type: Private Citizen

Commenter: Alan Hoover

Organization:

Excerpt Text:

As pointed out in the Coalition for Sustainable Aviations comments, simply ensuring that the run-up area is at least 500 meters from the airport boundaries reduces the public danger to health and welfare to negligible levels in all but the most egregious days. This kind of action would be easily done by the Federal Aviation Administration (FAA). The FAA and the general aviation industry are far along with providing an alternative fuel, such as 92UL which will further reduce the impact if the small amount lead released into the atmosphere. This is being done in a way that protects the safety of all of the pilots and passengers from engine failure in flight, as well of the safety of the general public on the ground.

Comment Number: EPA-HQ-OAR-2022-0389-0245-0006

Commenter Type: Federal Elected Official

Commenter:

Organization: Office of the California Attorney General et al.

Excerpt Text:

Much, if not all, of the lead emissions from piston-engine planes could be avoided. In 2014, the FAA launched the Piston Aviation Fuels Initiative (PAFI) to speed up the “deployment of the most promising unleaded replacements.”[Footnote 22: FAA, Piston Aviation Fuel Initiative, https://www.faa.gov/sites/faa.gov/files/about/initiatives/avgas/org_info/PAFI_White_Paper.pdf.] PAFI has led the FAA to certify various unleaded fuels, including the two most recent fuel replacements for leaded avgas: UL94 (a high-octane fuel alternative manufactured by Swift Fuels) and G100UL (a “drop-in-ready”)[Footnote 23: The term “drop-in-ready” means piston-engine planes are able to use the G100UL fuel without new mechanical parts or hardware modifications for planes. As a result, the FAA has certified the fuel for use in all piston-engine planes. See “About G100UL Avgas” in Avfuel, Unleaded Avgas, <https://www.avfuel.com/Fuel/Alternative-Fuels/Unleaded-Avgas>.] fuel alternative manufactured by General Aviation Modifications, Inc.). As of September 2022, the G100UL fuel has been approved for use in all “spark ignition piston-engines and every plane powered by those engines.”[Footnote 24: General Aviation Modification, Inc., Press Release: Sept. 1, 2022, https://gami.com/g100ul/PressReleaseG100UL9_1_22.pdf.] The UL94 fuel has been approved for use in 66 percent of piston-engine planes.[Footnote 25: Pimentel, Dan, “Swift Fuels Expands UL94 Distribution to Several California Airports,” FLYINGMAG (Aug. 3, 2021), <https://www.flyingmag.com/swift-expands-california-ul94-distribution/>.]

Despite these advancements in fuel technology and FAA certifications, unleaded aviation fuels have not successfully penetrated the market. Less than three percent of general aviation airports in the country sell unleaded alternatives. [Footnote 26: Zhang, Sarah, “Leaded Fuel Is a Thing of the Past-Unless You Fly a Private Plane,” MOTHER JONES (Jan. 10, 2013), <https://www.motherjones.com/politics/2013/01/private-planes-still-use-leaded-gasoline/>.] The underwhelming reception is largely due to the lack of regulatory pressure and incentives to transition the nation’s piston-engine fleet to safer, lead-free fuels.[Footnote 27: Ibid.]

In February 2022, the FAA announced a new initiative—Eliminate Aviation Gasoline Lead Emissions (EAGLE)—between U.S. government stakeholders and the aviation and petroleum industry to “safely eliminate the use of leaded aviation fuel by the end of 2030 without adversely affecting the existing piston-engine fleet.”[Footnote 28: FAA, EAGLE Initiative, <https://www.faa.gov/unleaded>.] The Proposed Endangerment Finding once finalized will be a critical step toward phasing out the use of leaded avgas and encouraging the adoption of unleaded fuels that will prevent further harm to communities living near general aviation airports.

Comment Number: EPA-HQ-OAR-2022-0389-0196-0005

Commenter Type: Private Citizen

Commenter: Barry Hensley

Organization:

Excerpt Text:

If the FAA refuses to enforce their vague and often contradictory rules and regulations, they could at least try to practice Environmental Justice by equally distributing the air traffic and resulting pollution. Currently air traffic and pollution is higher in disadvantaged areas. (see attachment 3) If you guessed that

Brentwood, Franklin and Spring Hill are where the wealthy people live, good guess. I would like to know who designated the area east of Interstate 24 as the flight training practice area of Middle Tennessee. This past year, this disadvantaged rural area has been inundated with leaded fuel exhaust pollution and noise pollution continually on a daily basis. What are the cumulative effects of the settled particulate on the tree leaves, the blades of grass, the water in the creeks and ponds, all of which the wildlife and livestock consume on a daily basis? Do the calves and fawns in this area have abnormal levels of lead in their blood similar to children exposed to high levels of lead? Most people I talk to are surprised that leaded fuel is still being used by small aircraft. The EPA could do a better job of communicating. Reading the comments of others living halfway across the country, has made me realize that "We are all riding on the same bus". Or as my mother used to say when I was dragging my feet. "GET THE LEAD OUT"

Comment Number: EPA-HQ-OAR-2022-0389-0219-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

The GA industry needs to stop pretending that they're not poisoning our children. The FAA finally stopped pretending that they never had the unleaded fuel that all these planes could use in 2022, more than 10 years before it was brought to them for certification.

To allow the continued use of AvGas, the GA industry needed more than the mega dollars appropriated from Congress, which are our tax dollars. They needed more than the FAA's refusal to certify GAMIs G100UL unleaded fuel that was available since 2010. They needed to be sheltered from the Clean Air Act. They needed compliance and acts of omission from the EPA. And they got it. Not to reach an endangerment finding would be to continue the most abject failure of the EPA in their history.

Comment Number: EPA-HQ-OAR-2022-0389-0153-0004

Commenter Type: Private Citizen

Commenter: Kimberly Turner

Organization:

Excerpt Text:

Lead causes adult mortality and irreversible damage to children. EPA must regulate the country's largest source of airborne lead. Every day of delay means more people, including hundreds of thousands of children, are breathing in lead. We urge the FAA to support communities, counties, and EPA in this much-needed process.

Lead is widely known to be toxic, particularly to children, yet the government for decades neglected the largest remaining single source of airborne emissions of lead in the country. It must end the use of leaded aviation gasoline now.

Lead exposure is responsible for nearly half a million adults dying annually from cardiovascular disease, and causes irreversible damage to children's development. EPA must finalize its endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly phase out leaded avgas.

It is unconscionable that EPA has failed to regulate the largest remaining single source of lead emissions to the air. Regulating lead aircraft gasoline is a major step in fulfilling the Biden-Harris administration's commitments to protect children's health and promote environmental justice.

Response to Comments Concerning FAA

Some commenters submitted comments requesting action from the FAA, or comments related to FAA's programs regarding the development, testing and certification of unleaded avgas, FAA's administration of airport funding, and suggestions that FAA implement mitigation activities at airports. These comments are beyond the scope of this action and thus require no further response.

To the extent that these comments raise issues related to the EPA's legal authority under CAA section 231 and duties of the EPA and the FAA following issuance of these final findings, the EPA addresses those comments in Section 7 of this RTC document and in Section III.C of the final notice for this action.

As we also note in Section 8.2.3, many commenters suggest that the EPA and the FAA work together to address a number of additional topics, such as the development of a strategy to expedite the transition to unleaded avgas, to mitigate exposures to airborne lead while the transition is underway, and to administer incentives that would encourage the use of unleaded avgas, especially at high-emitting airports in densely populated area. Suggestions such as these are beyond the scope of this action and thus require no further response.

Some comments relate to agencies and offices, other than EPA or FAA, such as GAO or the DOT OIG. These comments are beyond the scope of this action and thus require no further response.

In this section of the RTC, the EPA is focusing on comments related to the FAA. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, we respond to comments related to environmental justice in Section 3 of this RTC document. Comments regarding the endangerment finding are addressed in Section 5, comments regarding the cause or contribute finding are addressed in Section 6 of this document. We respond to comments regarding education and outreach in Section 8.2.2 of this document.

Section 8.4. Economic and Related Considerations

Comment Number: EPA-HQ-OAR-2022_0389-0742-0001

Commenter Type: Private Citizen

Commenter: Gregory Hutchins

Organization:

Excerpt Text:

I expect that, when lead was first identified as a chemical to be banned, there were numerous concerns voiced by private aviators and other operators of small aircraft that they would lose the substantial investment they had made in these machines that could only run on leaded fuel. That was a long enough time in the past that the industry should have made the necessary changes by now. The time for that argument has come and gone.

Comment Number: EPA-HQ-OAR-2022_0389-0640-0002

Commenter Type: Private Citizen

Commenter: Creighton King

Organization:

Excerpt Text:

the cost to implement eliminating lead from Avgas will be an astronomical cost on owners and Airports

and will hurt the performance of aircraft that need all that octane to get full power to not crash.. forcibly removing good fuel will cause many deaths from aircraft due to reduced available power. Every government dolt pushing this should have to recover the bodies themselves from a canyon in the mountains because the airplane no longer has the needed power.. keep the EPA in their own space and let's keep the FAA doing aviation safety and no longer allow them to waste time on political correctness.. they can't even keep NOTAM's computer running.. they need to focus but not on this..

Comment Number: EPA-HQ-OAR-2022-0389-0194-0032

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Again, nobody is using the [bold, italics: mere] presence of Tetraethyl Lead (TEL) as an [bold, italics: excuse] for shutting down airports. BTW: it's NOT just "Airport Authorities". Taxpayers have finally realized they do NOT want to make the ludicrous "Investment" that it will take to enable a handful of "Elite Users" for 1/3 of the "So Called Piston Engine Aviation Fleet" loaded with Negative Aviation Impacts (NAIs) and ZERO Socially Redeeming Values (SRVs), basically ZERO ROI for 99.998% of taxpayers.

It is not uncommon for GA airports to operate at a loss. Airports are capital-intensive enterprises, and the amount of money needed to meet Federal Aviation Administration (FAA) safety and operational requirements generally, for the majority of facilities that is, far outweighs the ability of General Aviation (GA) Facilities & airstrips to generate revenue.

These facts alone highlight Federal MANDATES are [bold: required] to invest in Municipal or Governmental owned Local, County, State or Federally owned Commercial Grade Federal Aviation Administration (FAA) Towered facilities to ensure long term ROI using ANY taxpayer dollars.

Maintaining Infrastructure, facilities, or the Capital Costs, usually budgeted but not always, are the astronomical [bold: ongoing] costs incurred to maintain long-term assets. This includes real actual examples of abusing Federal CARES Act dollars for weekend overtime to cut the lawn, trimming decorative bushes or updating and replacing landscaping including mulch, free coffee & internet access, promoting Special Interest or Industry Lobbyists events, signage or internet advertising, Offsite Business Meetings at Five Star Resorts complete with Golf Outings & "Door Prizes", even paying the electrical bill for operating extravagant unneeded Special Interest & Industry Lobbyist electrical holiday decorations. Of course, there way are too many other abuses to fully enumerate such as Air Conditioned Golf Course Lawn Grooming Tractors, almost a dozen vehicles with up to half a dozen trucks at any one time, personal expenses including cell-phone reimbursements, and even an industrial grade Caterpillar CAT Front End Loader, etc. BTW: this is just the [bold: tip] of the proverbial [bold: iceberg]! Oh my goodness, is everyone shocked & surprised now!

On the other hand, Capital Expenditures (CAPEX), is an outlay of additional non-trivial amounts of cash for long-term assets. These assets can be tangible, such as runway property expansions, upgrades of infrastructure and equipment, in addition to intangibles, such as patents and trademarks, legal cases & defense, research & studies, agreements, permissions & right of ways, etc.

Regardless of the availability of one Unleaded Aviation Fuel let alone the availability multiple Unleaded Aviation Fuels the vast majority of these facilities have absolutely NOTHING to do with the future of ANYTHING! These are NOT taxpayer problems and should NOT utilize ANY taxpayer money at all. Certainly, no more funding or support than Hunting, Fishing, Boating, Golf, Bowling, National Parks & Camp Grounds or other personal hobby sport recreational social entertainment venues or pursuits receive.

Aviation related protest & closure DOES have EVERYTHING to do with the full litany of Negative Aviation Impacts (NAIs), Taxpayer & Community ROI and whom is “Footing the Bill”. As NASA has recently revealed the majority of Aviation infrastructure & facilities are completely underutilized. The vast majority of airstrips are NOT required, coupled with extreme hostile arrogant threats, intimidation, harassment, & abuse, with no demonstrable, actually Zero ROI and ZERO Socially Redeeming Values (SRVs) the Public reckoning and remedy seem obvious to Taxpayers already stretched to the limit: immediate closure.

Remember, ALL these exorbitant costs for just a literal handful of “Elite Users” exploiting & gaming the FAA System, replete with a massive surplus of non-essential & un-needed Personal Hobby Sport Recreational Social Entertainment Venues, these FAA Codependent Enabled Uncontrolled (literally & figuratively) Protected Airstrip Fiefdoms have been running “Rough Shod” over communities, densely populated neighborhoods & schools all over the United States literally for decades, and should NO LONGER be propped-up, funded or use ANY taxpayer funds period.

Just look around, not hard to find a glut of underutilized aviation infrastructure & facilities that should be taken off “Aviation Welfare” AKA “FAA Life Support”, artificially “Propped-up” that should be shuttered permanently to remove the unneeded ridiculous Additional Tax Burden to US Taxpayers “Once and For All”.

Time to begin using freed-up funds for cleanup, remediation, and disposal so communities can take back their neighborhoods, reclaim and reuse poisoned contaminated property for healthy use by all. Citizens are realizing the truth all across the United States. The General Aviation (GA) Charade is over, hopefully this is just the beginning for Taxpayer Remedy. Taxpayers are FED UP, there are many [italics: real] examples across the United States that highlight this pivotal beginning. It’s truly a marathon NOT a sprint!

Comment Number: EPA-HQ-OAR-2022-0389-0227-0001

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The Associations represent general aviation aircraft owners, operators, and manufacturers, and the producers, refiners, and distributors of aviation gasoline that would be directly affected by any finding made by the EPA with respect to lead emissions from piston-engine aircraft, corresponding aircraft emissions standards, and related changes to the formulation of aviation gasoline.

The general aviation industry and related sectors support an estimated \$247 billion in economic output and 1.2 million jobs in the United States, [Footnote 4: PriceWaterhouseCoopers, Contribution of General Aviation to the US Economy in 2018 (2019), at https://gama.aero/wp-content/uploads/General_Aviation_s_Contribution_to_the_US_Economy_FINAL_20200219.pdf.] and the sector is recovering. It provides a lifeline to many towns across the country and provides critical services in times of natural disasters such as hurricanes, flooding, and wildfires, and provided support for the nation’s battle against COVID-19.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0002

Commenter Type: State Government

Commenter:**Organization:** Alaska Department of Environmental Conservation**Excerpt Text:**

Finalization of the rule as proposed without the existence and availability of a viable alternative fuel would turn thousands of piston-engine aircraft in Alaska into scrap, render billions of dollars invested over decades in airport infrastructure useless, devastate Alaska's economy, destroy thousands of jobs, and strand hundreds of Alaskan communities and their residents without transportation or supply alternatives. It would truly be a disaster. Hundreds of Alaskan communities cannot be reached by road and rely on piston-engine aircraft to deliver medicine, fuel, and food. Teachers, state troopers, physicians, dentists, students, contractors, and residents all rely on these same aircraft for access in and out of a community. As one rural resident stated: "If we didn't have our airport, we wouldn't have anything. The airport is a fact of life for living out here in the villages. The airport is our road, highway, ocean - our lifeline."

Comment Number: EPA-HQ-OAR-2022-0389-0248-0002**Commenter Type:** Private Citizen**Commenter:** Andrew Andraka**Organization:****Excerpt Text:**

Aviation activities and ensuring the safety of all those involved in operating aircraft is incumbent on an in-depth understanding of aircraft, operations, regulations, scale, and economics. Civil aviation in the United States represents 2.3% of the GDP, \$850 billion in annual economic activity, and 4 million jobs. All of that is underpinned by the already struggling general aviation community.

A senseless and mislead over regulation of general aviation engines would render 99.9% of the current US GA fleet un-usable and economically beyond adaptation. In an era of unprecedented pilot shortages, flight cancellations, and struggling military strategic competition, this regulation would literally remove the back bone of the entire industry. Without general aviation, there is no avenue for commercial or military pilots to learn to fly. The small industry will never recover from a hit like banning all of the light (and most fuel efficient) aircraft engines in the fleet. As an industry, we are privately exploring alternatives to 100LL. In the meantime, the use of 100LL in our communities is truly insignificant to the many other hazards the EPA should be focusing on.

General aviation, while very small in scale to nearly every other pollutant emitting industry in the country, is perhaps one of the most critical. It's the only avenue to provide pilots for our commercial flights, as well as our military.

Comment Number: EPA-HQ-OAR-2022-0389-0771-0001**Commenter Type:** Trade Association**Commenter:****Organization:** National Agricultural Aviation Association (NAAA)**Excerpt Text:**

Aerial Application Background.

As background to our comments, we believe it is important for the EPA to understand the background of the industry NAAA represents, which is the interests of the 1,560 aerial application industry owner/operators and 2,028 non-operator agricultural pilots throughout the United States licensed as commercial applicators that use aircraft to enhance the production of food, fiber, and bioenergy; protect forestry; protect waterways, pastureland, and rangeland from invasive species; and control health-

threatening pests, including mosquitos and other insect pests that spread West Nile virus, Zika virus and other deadly diseases.

Within agriculture and other pest control situations, manned aerial application is an important method for applying pesticides, and has been for 101+ years, for it permits large areas to be covered rapidly—by far the fastest application method of crop inputs—when it matters most. It takes advantage, more than any other form of application, of the often too-brief periods of acceptable weather for spraying and allows timely treatment of pests while they are in critical developmental stages, often over terrain that is too wet or otherwise inaccessible for terrestrial applications. It also treats above the crop canopy, thereby not disrupting the crop and damaging it. Although the average aerial application company is comprised of but six employees and two aircraft, as an industry these small businesses treat nearly 127 million acres of U.S. cropland each season, which is about 28% of all cropland used for crop production in the U.S. In addition to the cropland acres, aerial applicators annually apply to 5.1 million acres of forest land, 7.9 million acres of pasture and rangeland, and 4.8 million acres for mosquito control and other public health concerns. Aerial pest control for managers of forests, waterways and public health also add to these many millions of acres treated annually.

Aerial applications are often the only, or most economical method for timely pesticide application. Additionally, aerial application is conducive to higher crop yields, as it is non-disruptive to the crop and causes no soil compaction, thus improving soil health and the amount grown per acre. Data from a Texas A&M University economics study [Footnote 1: Dharmasena, S. 2020. “How Much is the Aerial Application Industry Worth in the United States?” Research presented at the 2020 Ag Aviation Expo, Savannah, GA. <https://www.agaviation.org/2020aatresearchpapers>] and the 2019 NAAA industry survey [Footnote 2: National Agricultural Aviation Association. May 2019. “2019 NAAA Aerial Application Industry Survey: Operators.”

<https://www.agaviation.org/Files/Comments/NAAA%202019%20Operator%20Survey.pdf>] were used to calculate that the aerial application industry is directly responsible for the production of 1.69 billion bushels of corn, 199 million bushels of wheat, 548 million pounds of cotton, 295 million bushels of soybean, and 3.33 billion pounds of rice annually that would be lost every year without the aerial application of pesticides. The value of the aerial application industry to farmers, input suppliers, processors, and agricultural transportation and storage industries for corn, wheat, cotton, soybean, and rice production in the U.S. is estimated to be about \$37 billion³. This figure is expected to grow substantially and in importance as food prices increase and food production becomes an issue of growing importance due to the Russian invasion of Ukraine, supply and demand issues, and a growing global population.

The aerial application of crop protection products results in greater harvest yields of crops. This in turn results in less land being used for agricultural production, preserving more wetlands for natural water filtration, forest ecosystems for carbon sequestration and habitat for threatened and endangered species. The Texas A&M [Footnote 3: Dharmasena, S. 2021. “Value of the Agricultural Aerial Application Industry in the United States” Research presented at the 2021 Ag Aviation Expo, Savannah, GA. <https://www.agaviation.org/2021aatresearchpapers>] study revealed that the total area of cropland needed to replace the yield lost if aerial application was not available for corn, wheat, soybean, cotton, and rice production is 27.4 million acres, an area roughly the size of Tennessee. Aerial applicators seed 3.8 million acres of cover crops annually. This means that aerial applicators are responsible for helping to sequester 1.9 million metric tons of CO₂ equivalent annually, which according to the EPA would be the equivalent of removing approximately 412,000 cars with carbon-combustion engines from the roads each year.

Safety concerns:

The aerial application industry supports the removal of leaded aviation gasoline when it can be done without disruption to the societal benefits our industry provides both agriculturally and environmentally. According to the 2020 FAA general aviation survey 15 percent of the aerial application fleet still depends on leaded aviation fuel. At a time of great concern about food security around the world with issues such

as the war in Ukraine and supply chain weaknesses, agricultural production in the US cannot afford to lose 15% of the aerial application industry's productive capability.

Comment Number: EPA-HQ-OAR-2022_0389-0541-0001

Commenter Type: Private Citizen

Commenter: Linda Schneider

Organization:

Excerpt Text:

[FL TEXT REMOVED] We worked to get the lead out of cars; I fail to understand why we still allow it in airplanes! [FL TEXT REMOVED] If we wouldn't want it in our backyards or streets, we shouldn't be imposing it on other vulnerable people! I've written about this issue before, but it remains vitally important to me! [FL TEXT REMOVED] Lead is especially toxic to young children and developing brains! We aren't saving money by allowing this continue; we will end up having to pay to undo the damages caused by lead! [FL TEXT REMOVED] Sincerely, Linda Schneider Arlington, VA 22202

Comment Number: EPA-HQ-OAR-2022_0389-0688-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Phillip Witt

Organization:

Excerpt Text:

I have been a Private pilot and aircraft owner for over 25 years now, and I am a retired Aerospace Quality engineer. Private and recreational flying has been an American heritage type of freedom not seen in many other countries of the world. Government regulations mandating a new fleet wide fuel, and or the modification of our engines to accept this fuel will be completely cost prohibitive and unnecessary. I have been able to review, and research the comments provided on this docket by the Coalition for Sustainable Aviation (CAS) and I am in total agreement with their proposed, no nonsense, safe solutions. I will encourage the FAA to implement these low cost and effective changes to the small number of airports with communities that are in close proximity. No need for blanket changes to airports nationwide. If it ain't broke, don't fix it.

Comment Number: EPA-HQ-OAR-2022_0389-0713-0001

Commenter Type: Private Citizen

Commenter: Mark Colman

Organization:

Excerpt Text:

Please No. Your family loved one may need access to Healthcare via Aviation. Enacting thus issue will endanger their life, since affordable fuel will no longer be possible...and the pilots that volunteer their services will no longer be able to afford helping you.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0008

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

Alaska wants to be a part of the solution and is standing by to provide piston-driven operations numbers, community connectivity information, and any other aviation data helpful in quantifying potential impacts. Alaska recognizes the need for piston-driven aircraft to run on unleaded fuel in the long term, and we want to help develop solutions. However, it is critical that any potential solutions do not have disproportionate impact to Alaska residents. We request that any solution be available for widespread use at a comparative cost so as to not adversely impact our rural residents.

Response to Comments Regarding Economic and Related Considerations

Some commenters submitted comments on issues related to costs, economic impacts, and safety concerns related to removing lead from aviation gasoline. Other comments assert concerns about anticipated costs and impacts of future standards, and how those impacts are distributed. Other commenters stated concerns related to regulation or over-regulation of the general aviation industry. Some comments asserted that use of leaded aviation gasoline was insignificant compared to other environmental issues. One comment contended that finalizing the rule without a viable existence and availability of a viable alternative fuel would have negative impacts in Alaska. Other commenters assert that general aviation is important to various parts of the economy (such as training commercial and military pilots, or agriculture), while others made assertions regarding the costs, profitability, and impacts of general aviation airports, referring to such issues as federal mandates, federal funding, FAA safety requirements, and infrastructure, and asserting that they only benefit a small number of people.

In response to these comments, the EPA notes that these comments are beyond the scope of this action and thus require no further response. The EPA did not propose, solicit comment, and is not finalizing any requirement to remove lead from aviation fuel or on any aircraft engine emissions standards. Accordingly, comments regarding the impacts or effects of such an action, including costs, economic and economy-wide impacts, and small business and aviation industry impacts associated with the removal of lead from aviation gasoline, are outside the scope of this action. Similarly, issues related to regulation of the general aviation industry, as well as comments related to the management and operation of general aviation airports (including federal funding, mandates, and requirements), are beyond the scope of this action and thus require no further response, as the Agency did not propose, solicit comment, and is not finalizing any requirement on the general aviation industry in this action. Furthermore, to the extent that these comments do not explain what aspect of the proposal should be finalized differently, the Agency does not consider the comment to be adverse to this action, and thus it requires no further response.

We further note that, as described in the final notice of this action, while the EPA and the FAA become subject to certain duties due to the issuance of these final findings, the final findings do not themselves apply new requirements to entities other than the EPA and the FAA. As described in Sections III.A and III.D of the final notice, as well as elsewhere in this RTC document, in this action, the EPA is addressing the predicate to regulatory action under CAA section 231 by making an endangerment and a cause or contribute finding in proceedings that are separate and distinct from any follow-on regulatory action. Accordingly, the endangerment and cause or contribute findings do not themselves impose burdens or costs on any non-federal entity. Additionally, consideration of any impacts (such as costs, economic impacts, safety considerations) of implementing any emissions standards that may be developed in the future is not relevant to this action. Rather, we anticipate that there would be an opportunity for commenters to raise such issues, and for the Agency to consider them as appropriate, in the context of any aircraft emissions standards rulemaking. Considerations that are relevant in the context of establishing aircraft emissions standards are briefly described in Sections III.C and D of the final notice. Furthermore, as discussed in section III of the final notice, under CAA section 231(a)(2)(A), this endangerment and

cause or contribute finding entail a scientific judgment by the Administrator about potential risks posed by lead pollution to public health and welfare and about whether emissions of lead from covered aircraft engines cause or contribute to that air pollution. Issues related to what aircraft engine emissions standards may be established in the future, or what costs or impacts any future standards may have, are not relevant to the determinations that must be made in making an endangerment or cause or contribute finding.

In this section of the RTC, the EPA is focusing on comments related to assertions that covered aircraft emit a small amount of lead. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, the EPA responds to comments regarding its legal authority in Section III.D of the final notice for this action and in Section 7.1 of this RTC document, to comments regarding the legal framework for this action in Section 7.2 of this document, to comments regarding its authority to address leaded aviation fuel in Section 7.3 of this document, and to comments regarding aircraft engine emissions standards in Section 7.4 of this document. The Agency responds to comments related to the amount of lead emitted from aircraft or the significance of these emissions in Sections 6.2.1, 6.2.2, and 6.2.3 of this RTC document.

Section 8.5. Comments on the Aircraft Industry

Comment Number: EPA-HQ-OAR-2022-0389-0210-0003

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

On a local level, we are strongly committed to helping the aviation industry transition away from 100LL fuel to the new unleaded fuel once it is commercially available. To this end, on November 15, 2022, the Middleton City Council authorized the purchase of a used 1,200-gallon fuel tanker truck at a cost of nearly \$50,000 to allow the Middleton Airport to offer a 94-octane, unleaded fuel (94UL) alternative for those airplanes that can utilize it, until a 100UL fuel option is available to replace the existing 100LL fuel. We expect the fuel tanker truck to be ready for transportation to the Middleton Airport by the end of January and have already established the necessary account with the 94UL distributor to begin receiving the 94UL fuel once the tanker truck is on the airport property. Once we have 94UL fuel available at the airport, we will create a very safe program to assure that only planes that can safely use 94UL fuel can use it. Although the Middleton Airport cannot cease sales of the 100LL fuel until the 100UL fuel is commercially available, we believe that offering the 94UL alternative option is an important step in supporting the general aviation industry transition to fully unleaded aviation fuel.

City officials take the transition to unleaded aviation fuel seriously. The City of Middleton is working diligently to determine how to receive distribution of 100UL or other similarly approved unleaded fuel at the airport as soon as it is commercially available, and we believe a finding of endangerment and promulgation of nationwide standards and rules will expedite this transition.

Comment Number: EPA-HQ-OAR-2022-0389-0163-0001

Commenter Type: Trade Association

Commenter:

Organization: National Air Transportation Association (NATA)

Excerpt Text:

On behalf of the National Air Transportation Association (NATA), thank you for the opportunity to submit comments on the Environmental Protection Agency's (EPA) proposed endangerment finding on lead emissions from aviation gasoline.

NATA, the voice of aviation businesses and an active participant in unleaded aviation fuel stakeholder groups, is uniquely qualified to discuss the issues surrounding a rational transition to unleaded aviation fuel, provide best practices for deploying unleaded avgas, and act as a conduit for collaboration between airport stakeholders, users, and community leaders.

Representing over 3,700 member locations, NATA advocates on behalf of a broad array of aeronautical service providers requisite for a vibrant general aviation sector, including Fixed Base Operators (FBOs), fuel producers and suppliers, and roughly 220 general aviation airports. NATA members range in size from large companies with international presence to smaller, single-location operators that depend exclusively on general aviation for their livelihood.

NATA, along with other industry and government stakeholders, supports the Eliminate Aviation Gasoline Lead Emissions (EAGLE) Initiative's goal of a lead-free future for U.S. piston-engine aircraft by the end of 2030. To that end, the Association supports efforts to develop a commercially viable, fleet-wide, unleaded alternative to 100LL, including provisions for increased funding in the upcoming FAA Reauthorization to accelerate the required testing and regulatory approval for the implementation of an unleaded avgas, as well as infrastructure grants where investments in alternative unleaded fuel will become more widely available.

As we collectively move toward a scalable solution, NATA and its members are demonstrating leadership in keeping a safety-first focus on infrastructure support, as well as on the development of resources and training for airports, FBOs, and other refueling operators. For example, the Association recently released the 'Unleaded Avgas Conversion Considerations for Aviation Fuel Providers' white paper to educate fuel service providers on best practices for the safe and effective deployment of unleaded avgas and will continue to assist the industry throughout every phase of this process.

Early on, Congress, the FAA, and industry recognized that our strategy must align and that research, development, evaluation, implementation, and the crafting of sound policy must be collaborative in the transition from leaded aviation fuel. In furtherance of this shared mission, NATA, FBOs, fuel suppliers and producers, Maintenance Repair Overhaul (MROs), and other aviation industry stakeholders are dedicated to working with the FAA and EPA to secure the necessary regulatory approvals for a fleet authorization, lead-free alternative avgas to replace 100LL that is compatible with existing infrastructure, while maintaining 100LL availability across the country during the transition.

Even though 2030 is the target to achieve a fleet authorization, lead-free alternative to 100LL, we hope to obtain that goal much sooner with industry and government working together.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-028-0005

Commenter Type: Advocacy Organization

Commenter: James Lawson

Organization: Southern Maryland Fair Skies Coalition

Excerpt Text:

The aviation industry makes the argument that they need more time to transition to unleaded fuel, just like the public safety and cost of unleaded fuel. How much more time do the aviation need. The industry has two or more decades to stop harming the people who live near airports. I asked the question to the aviation industry, why is your right to fly airplanes that destroy lives on the ground more important than the health and lives of people who live near airports.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0019

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Does any of this gibberish, double-talk and non-sense sound familiar? Are any of these really Taxpayer concerns?

HOPA – the Homeowner and Parents Associations (HOPA) AKA Taxpayers all across America AKA Families and Residents AKA We the People are certainly anti-Negative Aviation Impacts (NAIs) to [bold: actively protect] Communities of densely populated neighborhoods & schools and especially related vulnerable populations. These efforts include eliminating wasted taxpayer money spent on a handful of “Elite Users” while removing underutilized, superfluous hobby, sport recreational social entertainment venues located anywhere near homes & schools making funds available for beneficial Community investments & improvements.

Time to eliminate Freeloading non-essential non-strategic facilities that are NOT taxpayer problems and never have been. There are certainly more than enough other infinitely more suitable and easily accessible facilities that can be utilized in their stead as NASA studies can attest to. BTW: the economic health, rosy or not, of the General Aviation (GA) Community is NOT a Taxpayer Problem and NEVER has been.

Taxpayers and their Families are Sick (literally) & Tired and do NOT want to continue paying for or make any future Investments required to support Outdated Non-Strategic Toxic Dead-End Technologies, Dangerous Aircraft & Practices that have NOTHING to do with the future of ANYTHING, again literally for a handful of “Elite Users”.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0011

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[Bold: Are Aviation Industry Members AND Cohorts with Other Pariah Industries or Groups like Tobacco, Lead, & Big Oil Complete with the Defenders & Protectors of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) AKA the General Aviation (GA) Avgas Coalition (GAAC)?]

Aviation Industry players along with Special Interests & Industry Lobbyist giants have successfully leveraged & employed the same tactics that made the Tobacco & Lead Industry Pariahs in the global public health conversation. In the last two decades, the Public Health Community has generally agreed that neither Pariah Industry has ANY role in setting any policy or sponsoring subsequent health policy research at all. The Framework Convention on Tobacco Control (FCTC) bans industry participation in policy deliberations. Most major global public health organizations and national health departments have sharply limited their interactions with representatives of the either industry, and many universities and journals no longer accept or publish research supported by the Tobacco or Lead industry.

-World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC).

-WHO Framework Convention on Tobacco Control (html) - PAHO/WHO | Pan American Health Organization (PAHO). The WHO Framework Convention on Tobacco Control (WHO FCTC) is the first (2005) treaty negotiated under the auspices of the World Health Organization (WHO). The WHO FCTC is an evidence-based treaty that reaffirms the right of ALL people to the highest standard of health.

-World Health Organization (WHO).

-Framework Convention Alliance (FCA). As of Nov 1, 2022 - the Framework Convention Alliance (FCA) is now officially the Global Alliance for Tobacco Control (GATC).

However, no such agreement has been reached on the appropriate role for industry, corporations and trade associations in other sectors such as Aviation. The rampant perceptions of dishonesty, collusion, multiple conflicts of interest, unethical behavior and outright deception & lies abound. Open, Obvious, Blatant conflicts of interest along with demonstrable patterns of health deficits and disease over the last 6 decades, 60 years, surely make any judgements or even any opinions appear to be disingenuous, inappropriate, misguided, completely biased, patently misleading and or false!

Do the Special Interests & Industry Lobbyists control the Federal Aviation Administration (FAA) or Aviation Industry or vice-versa? Is it collusion or collaboration or both? It appears the Federal Aviation Administration (FAA) has enough time to attend Special Interest & Industry Lobbyist Fly-Ins, picnics, and barbecues across the country without addressing deadly Public Health, Safety and Welfare loopholes, while “Green Washing” and ignoring the issues & their accompanying dire consequences. What could possibly be behind all the combined reasons to deter, delay and derail policies used by all of these Pariah that COULD save millions of lives and avoid preventable health outcomes:

- fear-mongering “Safety”: “Sky is Falling” unquantifiable contrived fake phony almost fraudulent claims
- greenwashing “Sustainability”: unquantifiable contrived fake phony almost fraudulent claims
- using Patriotism, Loyalty, Defense or Military Service, and “Love of Country” as convenient shields, including “Arsenal of Democracy”, Veterans Day, Fourth of July, other holidays, etc.
- using Family, Children, Schools, learning or STEAM (Science, Technology, Engineering, Arts or Mathematics) as convenient shields
- callous indifferent merchants of preventable harm, damage, illness, disease, mayhem & death
- conspiracy/cover-up artists
- threatening, violent, elite, privileged, arrogant selfish community pariah
- false ‘sense of entitlement’, wealth, protection, impunity
- inconvenience, personal time, money & effort
- exploit multiple artificially created loop hole(s), government dysfunction, “grid-lock”, blame game, etc.
- captive audience(s)
- political connections
- massive unencumbered highly profitable markets
- blood money
- toxic pied-piper
- corporate leviathans
- bumbling fools, buffoons, clowns & town idiots including Pro-Aviation-Lead, power hungry or disgruntled “Burrowed In” Local, County, State & Federal Government employees
- beleaguered, legitimate industry
- non-taxpayer problems: General Aviation (GA) Industry decline, disappearing influence, shrinking market reach, government funding, mythical Commercial Airline pilot shortages, ANY flight training activities, aviation clubs AKA flying clubs AKA Social Clubs, increasing pilot / aircraft age & shrinking demographic, personal or financial constraints, increasing General Aviation (GA) Popularity & Access, other privately owned commercial business concerns, etc.
- multiple conflicts of interest: ALL, SOME or NONE of the above or are there MORE Special Interest or Industry Lobbyist excuse(s) double-talk & gibberish?

Aviation, Aircraft, Lead, Oil Industries and related Special Interest & Industry Lobbyist groups continue to spend millions to push back as any new unleaded fuels will need to overcome way more than bureaucracy. Industry players are defending their control over Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) and ANY replacement(s), according to numerous public interviews with pilots, aviation executives, and ex-oil company employees. BTW: Suitable Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) replacements have been available for years!

Collaboration, Cooperation, Collusion, Conspiracy or Common Convenient Coincidences?

A conspiracy, also known as (AKA) a plot, can be a secret plan, agreement or scheme between persons (called conspirers or conspirators) for harmful or sometimes unlawful purpose especially with political or specific ideological motivations, e.g. Special Interests or Industry Lobbyists, while keeping their agreement secret, obscured, certainly un-advertised or not openly broadcast or communicated to the public or to people affected by their efforts. In a sense, a conspiracy refers to a group of people united in their goal to usurp, alter, overthrow, delay, obstruct, influence, impede, impair or defeat an established power, norm, rule or regulation.

Depending on circumstances, a conspiracy may also be a crime, but with utmost certainty a civil wrongdoing. The term generally implies wrongdoing or illegality on the part of the conspirators, as people would not need to conspire to engage in activities that were lawful or ethical, or to which anyone could, should or would object. In summary a conspiracy can be thought of as a ruse or series of devious stratagems (maneuvers) to outwit or trick opponents or adversaries to achieve an end goal.

Some Common Accepted Basic Definitions Related to a Conspiracy

-Cartel: a coalition, cooperative alliance or arrangement between groups intended to promote a mutual interest. Members of a cartel generally maintain their separate identities and financial independence while engaging in cooperative policies, actions, pledges, promises, vows, or statements. A cartel can be seen as the worst type of violation, including antitrust, and one that warrants zero tolerance, but can also be the hardest to detect, deter, prevent or prosecute.

-Coalition: an alliance for combined action, especially a temporary alliance of distinct parties for joint collective action(s) to achieve joint purpose(s) or outcome(s).

-Collude – Collusion: concealed, secret or illegal cooperation, a conspiracy for a deceitful purpose, especially in order to cheat or trick others. Formal agreements in the open are usually not used to avoid leaving any easily detectable information trail that could be used as evidence in a public forum or formal proceeding. Tacit Collusion is usually done via informal agreements (wink wink, nod nod) and can be accomplished without explicitly speaking to other members publicly, using an implied or obvious unspoken understanding as the basis for cooperation.

-Cover-up: coordinated, planned effort to conceal wrongdoing, harmful or wrongful acts such as ignoring well identified, known toxic threats & dangers to Public Health, Safety and Welfare.

-Deceit – Deceitful: guilty of or involving deceit; deceiving or misleading others. Commonly such acts are irresponsible involving lying, insincerity, e.g. making false or dishonest statements.

-Defraud: interfere with or obstruct one or more lawful governmental functions by deceit, craft or trickery, or at least by means that are dishonest, to lie, mislead, misrepresent to trick people, to get something by dishonesty or deception. To defraud stresses depriving people of rights and protections and usually connotes a deliberate perversion of the truth.

-Devious: dishonest, often in a complex, complicated way, skillful use of underhanded tactics to achieve a goal or end result.

-Dishonest: implies a willful perversion of truth in order to deceive, cheat, or defraud, e.g. based on facts that simply do NOT exist.

-Oligopoly: small number of relatively large groups focused on similar, highly related, usually mutually beneficial but slightly different interests, goods, services or markets addressed. Oligopolistic groups band together to collude to dominate or influence specific area(s) of interest.

-Untruthful: stresses a discrepancy between what is said and fact or reality, e.g. what acts are actually performed, what is actually accomplished and what's actually measurable or demonstrable.

Some Common Accepted Ingredients Required for a Conspiracy

-Presence of an Agreement – in many common situations & cases informal, e.g. tacit collusion

-Membership in the Agreement – banding together as a coalition or cartel

-Intent To Participate – shared or overlapping public goals, strategy, tactics or actions, pledges, promises, vows, or statements, etc.

-Overt Actions - pervert the course of truth, accountability, justice by deceitful dishonest means, e.g. regarding Involuntary Poisoning violating the "Bodily Integrity" rights of millions protected by the United States Constitution via deception, propaganda, misrepresentation, misleading statements and outright lies.

General Aviation (GA) Tetraethyl Lead (TEL) Cartel (GATELC) Previously Remembered as General Aviation (GA) AvGas Coalition (GAAC)

Are the following the “not so secret” affairs of a deceitful dishonest untruthful oligopolistic cartel colluding to cover-up & defraud the American public, swindle, in a corrupt underhanded way by exploiting complex politics & influence peddling of dysfunctional but necessary essential government collaboration & cooperation across different government branches with unique charters & responsibilities, with the intent to “muddy the waters”, e.g. using deceitful dishonest means to create friction, problems or inhibitors for the purposes of influencing, delaying or changing deadlines & timeframes with seemingly indefinite impossible unreachable immeasurable milestones for any regulatory or other action against Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)?

The real questions are: are these the Overt Actions of a Conspiracy, Cartel or Coalition or is this just a set of Common Convenient Coincidences? Should the General Aviation (GA) Avgas Coalition be remembered as the General Aviation (GA) Avgas Cartel (GAAC) or should it be remembered as the General Aviation (GA) Tetraethyl Lead (TEL) Cartel (GATELC)? Many believe the true moniker should really be: General Aviation (GA) Tetraethyl Lead (TEL) Cartel (GATELC).

Everyone should examine the track record of the almost last sixty (60) years, almost six (6) decades, by a seemingly common Gang of Usual Suspects, eager & willing participants with unified actions that result in identical negative outcome(s) repeated over and over and over ad nauseum. Let public record speak for itself, ALL Taxpayers should be made aware and provided with complete information to be their own judge especially when it comes to defending & protecting the Health, Safety and Welfare of vulnerable populations of pregnant moms, babies, school children and elderly.

Defenders & Protectors of Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL):
General Aviation (GA) AvGas Coalition (GAAC)

Since when does a Toxic Fuel AKA Avgas AKA Leaded Aviation Fuel 100LL with Tetraethyl Lead (TEL)

require or even need a “Coalition” or a “NOT So Secret Society” for “GreenWashing” & “Protection”? Only the “Defenders” & “Protectors” from “Threats” against Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) AKA the General Aviation (GA) AvGas Coalition (GAAC) know for sure: -GA Avgas Coalition reacts to threat against avgas in California (html) 05-12-2011 — General Aviation News. The coalition also includes several representatives of the petroleum industry, but they did not join in with the aviation industry representatives in issuing the statement, as some are named as potential litigants.

-GA Avgas Coalition: Threatened Lawsuit Over Avgas Ignores Extensive Efforts Underway Or Already Completed (html) 05-28-2011 – General Aviation Manufacturers Association (GAMA).

-GA Avgas Coalition Praises FAA's Announcement to Solicit Candidate Fuels in Search of an Unleaded Avgas (html) 06-10-2013 | NBAA - National Business Aviation Association.

-GA Avgas Coalition Praises FAA's Announcement To Solicit Candidate Fuels In Search Of An Unleaded Avgas (html) 06-10-2013 – Aircraft Owners and Pilots Association (AOPA).

-FAA Wants Avgas Replacement in Five Years (html) 06-11-2013 - FLYING Magazine. Evaluations of unleaded fuels to start next summer. The General Aviation Avgas Coalition (GAAC), comprised of several aviation groups including the Aircraft Owners and Pilots Association (AOPA), General Aviation Manufacturers Association (GAMA) and National Business Aviation Association (NBAA), praised the Federal Aviation Administration (FAA) announcement.

-Federal Register :: Advance Notice of Proposed Rulemaking on Lead Emissions From Piston- Engine

Aircraft Using Leaded Aviation Gasoline (html) (pdf) 04-28-2010.

-INNOSPEC » Octane - INNOSPEC. The LAST & FINAL company producing Tetraethyl Lead (TEL) on Planet Earth actively continues to profit & dupe the world with “Responsible Tetraethyl Lead (TEL) Supply and TEL Stewardship”, really?

Comments of the General Aviation Avgas Coalition (GAAC): On The Advance Notice Of Proposed Rulemaking On Lead Emissions From Piston-Engine Aircraft Using Leaded Aviation Gasoline (pdf) 2010 | American Fuel & Petrochemical Manufacturers (AFPM), EPA Docket No. EPA-HQ-OAR-2007-0294, on behalf of the following list of “Who’s Who in Aviation” members:

- General Aviation AvGas Coalition (GAAC) Pariah:
- Aircraft Owners and Pilots Association (AOPA). Your Freedom to Fly. Your Freedom to Pay for it Yourself. Your Freedom to Pay for Massive US cleanup of Your Tetraethyl Lead (TEL) Mess!
- Experimental Aircraft Association (EAA) | Oshkosh, Wisconsin.
- General Aviation Manufacturers Association (GAMA).
- National Air Transportation Association (NATA).
- National Business Aviation Association (NBAA).
- American Petroleum Institute (API).
- American Fuel & Petrochemical Manufacturers (AFPM) | We Make Progress. AFPM was previously known as: National Petrochemical and Refiners Association (NPRA).
- Recent General Aviation AvGas Coalition (GAAC) member organizations include:
- American Association of Airport Executives (AAAE).
- Helicopter Association International (HAI).

Aviation, Lead & Big Oil Industry, Special Interests, Industry Lobbyists, Marketing & Public Relations Firms Use identical ‘GreenWashing’ Tactics from Common Playbook Separately & Together to Dupe the American Public!

‘GreenWashing’ involves making unsubstantiated claim(s) to fool, trick, deceive or dupe the public into believing that products, actions, statements, efforts, vows or pledges are [*italics: actual*] environmentally friendly commitments and / or have a greater positive environmental impact than they actually do, or even [**Bold: ANY**] positive quantifiable [*Italics: impact*] at all in many cases!

Using common tactics & practices from the same playbook show that the combined forces of the Aviation, Lead & Big Oil Industries supported by related Special Interests, Industry Lobbyists, Marketing & Public Relations Firms obscure massive long-term commitments & investments and that there are NO real plans or real actions to clean up or address [*italics: any*] meaningful Public agenda barreling ahead with plans to pump more highly profitable [**bold: dirty**] fuels such as Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) for [**bold: years to come**] as in past efforts.

There They Go Again: Oil Industry Opposition to Protecting Children from Toxic Lead Pollution (html) 02- 11-2011 | Environmental Defense Fund (EDF). The old “Sky is Falling” Safety Defense Playbook claims from 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) proponents such as the General Aviation (GA) Avgas Coalition (GAAC) have derailed any protections for children’s health literally for decades.

Same stuff, different day in 2022 / 2023.

The Aviation Industry, Special Interests & Industry Lobbyists continue their decades-long anti-science campaign of misinformation roadblocking true, science-based

findings, determinations and evident Human Collateral Damage and continue to acquiesce, delay, postpone, ignore and outright lie about the consequences of poisoning from Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL).

Aviation & Lead Industry Leverage & “Play Follow the Leader” Mimicking the Most Profitable Powerful Cohort Leader’s Long-running Disinformation Campaign Track Record with Their Own

The public record over the last decade demonstrates how the fossil fuel industry is ‘GreenWashing’ its public image with promises and actions that Big Oil executives knew would not meaningfully reduce emissions, even as the industry moved aggressively to lock in continued fossil fuel production for decades to come.

These efforts are particularly offensive because of the amount of money the biggest oil companies are making. The fossil fuel industry’s failure to make meaningful investments in a long-term transition to cleaner energy is particularly outrageous in light of the enormous record profits these companies are raking in at the expense of consumers — including nearly \$100 Billion in combined profits for Exxon, Chevron, Shell, and BP just in the last two quarters of 2022. So, the Aviation & Lead Industries just tag along for the ride so to speak.

Lead Industry Influence in the 21st Century: An Old Playbook for a “Modern Metal” (html) (pdf) 09-30-2022 | American Journal of Public Health AJPH | Vol. 112 Issue S7. The hazards associated with lead exposures have been well known for centuries while the industry actively promoted lead products. Less well known is how the Lead Industry continues to promote the “safe and responsible” use of lead and support research to question the underlying science and avoid regulation. Lead industry associations continue to employ some of the same themes that have proven successful in the past. Efforts to forestall regulatory initiatives to reduce emissions and restrict lead applications continue. Lead in Aviation Fuels continues to be sold in the United States [bold: decades] after the ban on lead in gasoline. An argument that has been repeatedly used is that because lead products are not universally banned, lead is a “then-lawful product for a then-lawful use.” Industries have shifted to adopt new messages and promote lead usage, delay regulations, and even rebrand lead as “green” AKA “GreenWashing”. Some entities, even work to “promote and support the ‘safe and responsible’ use of lead,” which is “critical to achieving a sustainable and low carbon future.” Sound familiar?

From Big Oil to Big Green: Holding the Oil Industry to Account for the Climate Crisis eBook (html) 2022 | Books Gateway | MIT Press | Massachusetts Institute of Technology (MIT). Documents how “Big Oil” has managed to avoid being held financially accountable for past harm while claiming a false misleading ‘GreenWashing’ transformation from ‘Big Oil’ to ‘Big Green’. Open Access DOI: <https://doi.org/10.7551/mitpress/14293.001.0001>.

Hearing: Fueling the Climate Crisis: Examining Big Oil’s Prices, Profits, and Pledges (html) 09-15-2022 | Environment (117th Congress) | House Committee on Oversight and Reform (html).

Press Release: Ahead of Hearing, Committee Releases Memo Showing Fossil Fuel Industry is Misleading the Public About Commitment to Reduce Emissions (html) 09-14-2022 | Environment (117th Congress) | House Committee on Oversight and Reform (html). Investigation of Fossil Fuel Industry Disinformation Memo (pdf) 09-14-2022, 22pg. Selected investigation documents. (pdf) 226 pg.

Big Oil PR Firms Reject Invite to Hearing on Climate Disinformation (html) 09-14-2022 – Truthout. The congressional hearing will confront oil companies’ lies and profiteering — and the ads that make it possible. Meriam-Webster has added the word “greenwash” to its dictionary, a development not lost on Public Relations (PR) industry critics and climate campaigners who have spearheaded the effort between Big Oil propaganda and the PR / Marketing firms who craft and help market such [bold: deceitful] messaging.

Big Oil - statistics & facts (html) 05-22-2022 | Statista.

The Power of Big Oil (html) April 2022 | FRONTLINE | Public Broadcasting System (PBS). A three-part documentary series, FRONTLINE investigates the decades-long failure to confront the threat of climate

change and the role of the fossil fuel industry. Part One: Denial, April 19, 2022 / 1h 25m | Part Two: Doubt, April 26, 2022 / 54m | Part Three: Delay, May 03, 2022 / 54m.

Some Cities, States Say Big Oil Should Pay for Climate Damage (html) 04-13-2022 | The Pew Charitable Trusts. Fixing damage will cost tens, if not hundreds, of millions of dollars. And many local leaders think Big Oil companies should pay for it.

The clean energy claims of BP, Chevron, ExxonMobil and Shell: A mismatch between discourse, actions and investments (html) (pdf) 02-16-2022 - PubMed Central (PMC) | National Center for Biotechnology Information (NCBI) | National Library of Medicine (NLM) | National Institute of Health (NIH) | U.S. Department of Health & Human Services (HHS) | USA.gov. Until actions and investment behavior are brought into alignment with discourse, accusations of greenwashing appear well-founded with public statements dominated by pledges rather than concrete actions.

Press Release: At Historic Hearing, Fossil Fuel Executives Admit Climate Crisis Is an “Urgent” Threat (html) 10-28-2021 | Environment (117th Congress) | House Committee on Oversight and Reform (html). Hearing: Fueling the Climate Crisis: Exposing Big Oil’s Disinformation Campaign to Prevent Climate Action (html) 10-28-2021 | Environment (117th Congress) | House Committee on Oversight and Reform (html).

Fueling the Climate Crisis: Exposing Big Oil's Disinformation Campaign to Prevent Climate Action (text) (pdf) 10-28-2021, 105 pgl Congress.gov | Library of Congress (LoC).

Oil companies discourage climate action, study says (html) 09-28-2021 – Harvard Gazette | Harvard University. Harvard researchers chart evolution from denial to misdirection as House inquiry widens to expose Big Oil telling the public one thing and then saying and doing the opposite behind closed doors.

Press Release: Oversight Committee Launches Investigation of Fossil Fuel Industry Disinformation on Climate Crisis (html) 09-16-2021 | Environment (117th Congress) | House Committee on Oversight and Reform (html).

A prescription for Big Oil (html) (pdf) February 2020 - The Lancet Planetary Health (html) | The Lancet. At the start of 2020, the British Medical Journal (BMJ) became the latest health focused institution to take a stand against major polluters—it will no longer accept research funded by, or advertising from, fossil fuel companies. It also launched a campaign to get other medical institutions to divest from the industry. In an editorial announcing its plans, the journal said: “This is not a matter of playing party politics or anti-corporate posturing. Taking action is a duty to the people we serve and to future generations. And we can act: by divesting from health harming industries.” DOI: [https://doi.org/10.1016/S2542-5196\(20\)30039-5](https://doi.org/10.1016/S2542-5196(20)30039-5).

NOTE: rampant “Aviation Industry Propaganda & Influence Peddling” always has and continues to ignite extreme threatening violent rhetoric, coupled with revenge & retaliation via disingenuous low flying take-offs & landings meant to bully, harass and intimidate the general public with impunity practiced and expertly executed by many aircraft owners, pilots, especially aviation clubs AKA flying clubs AKA “Social Clubs” and the Civil Air Patrol (CAP), a pathetic local “MDOT 1d2 Frat House” based Civil Air Patrol (CAP) AKA Civil Air Pariah (CAP), to protect & preserve their literally unquestioned free reign of control & abuse over schools & densely populated neighborhoods, while of course abusing public funding duping the American Taxpayer. Just ask anyone across the entire United States that resides, works or plays near an uncontrolled, literally & figuratively speaking, airport that doesn’t own, operate or have any business interest in any aircraft related endeavors!

Comment Number: EPA-HQ-OAR-2022_0389-0392-0001

Commenter Type: Private Citizen

Commenter: Linda Jung

Organization:

Excerpt Text:

[FL TEXT REMOVED] The slow emergence of a viable alternative: Scientists have not come to a general consensus on an alternative for the replacement of lead. This has led to the slow emergence of a viable alternative that will replace lead as an important aviation fuel additive. The lack of political will by governments: Most governments lack the political will to create policies that will fast-track the replacement of lead. The lack of fiscal incentives: Virtually no fiscal incentive or policy exists that will create the right atmosphere for an alternative fuel additive to strive. The lack of price incentives: Money is a major factor in every project. Currently, there are no price incentives to encourage investors to invest in an alternative fuel additive. Lack of general consensus: No general consensus exists among major stakeholders in the aviation cum aviation fuel industry on the phasing-out of lead in aviation fuel. The lack of public sensitization and education on the issue: It took public awareness for the dangers of global warming to be discussed on the political stage, such an awareness will be needed to create an urgency that will eventually move world governments to take active steps in the phase-out of lead in aviation fuel. [FL TEXT REMOVED] Sincerely, Linda Jung Harlem, GA 30814

Comment Number: EPA-HQ-OAR-2022_0389-0431-0001

Commenter Type: Private Citizen

Commenter: Peter Wang

Organization:

Excerpt Text:

I understand the difficulty in replacing leaded gas for planes. However, it has been many years that we have known about this issue and progress has been slow to negligible. Adopting an "endangerment finding" is likely to spur efforts to find an acceptable substitute for leaded avgas, and/or accelerate the phase-in of planes that work well with unleaded avgas. There is at least one promising unleaded avgas approved by the FAA, G100UL

Comment Number: EPA-HQ-OAR-2022_0389-0542-0001

Commenter Type: Private Citizen

Commenter: Donna Reilly

Organization:

Excerpt Text:

I have some limited knowledge of avgas, as I worked as a private citizen with Winthrop's Air Hazards Committee and the Town's Board of Health (BOH) from 2017 thru 12-2019 on this avgas issue. First of all, I think it important to note that avgas is still used, because small, piston-engine planes need some lead to prevent damaging engine knock, or detonation, that can result in sudden engine failure. However, according to the EPA, these planes account for half of the lead pollution in US skies. ("The Collateral Damage of the US's Airport "Sacrifice Zones"" by Kit Norton, truth-out.org) On 12-14-17, Bill Schmidt of Winthrop's BOH, an Air Hazard's member, and I conducted a phone conference with former MA State Senator and owner of Cape Air/Nantucket Airlines Dan Wolf. We learned that Cape Air, under Wolf's direction, was an active participant of Piston Aviation Fuels Initiative (PAFI), which was "working on replacement fuel that is piston-engine compatible and more efficient and less costly than replacing the engines in the small aircraft where you run into certification and expense issues." (My 12-26-2017 letter to D. Wolf with copies to Air Hazards Chair, BOH Chair, House Speaker Robert A. DeLeo, and Senator Joseph A. Boncore. Note that Mr. Wolf told us on 12-14-17 that he had "20 planes on order from Italy" that were more efficient. In fact, in the 06-2019 issue of "Flying," there is an article about Cape Air's efforts to revamp its old fleet of old Cessna 402's and invest in a fleet of 100 P2012's manufactured by

Tecnam in Naples, Italy. I recently researched that the P2012's still run on Mogas, Avgas, Diesel, or Jet A1. However, according to the 06-2019 "Flying" article, "the main advantages and features of the Lycoming engines include reduced fuel consumption and the active engine protection it affords against knock, overboost, and high temperatures, thereby ensuring a more trouble-free existence compared with older-generation turbocharged engines." On 10-29-19, we met with Massport, and spokesperson Flavio Leo. I asked if Cape Air had purchased what I thought were electric planes. He said that the FAA has yet to approve electric planes. That's the last word I have on Avgas. Appears from the 06-2019 "Flying" article that the P2012's are not totally electric and do rely on some fuel be it Mogas, Avgas, Diesel, or JetA1. Still, in comparison to the old Cessna 402's, investment in these P2012's could certainly help reduce the amount of lead needed to run small piston engine planes. All I have on avgas as of 01-09-23.

Comment Number: EPA-HQ-OAR-2022_0389-0634-0002

Commenter Type: Private Citizen

Commenter: Jessica Kuzmier

Organization:

Excerpt Text:

Another concern is the obvious reality that this fuel contributes to global warming, and we need to do what we can to invest in sustainable fuels. Alternatives from companies such as Swift could be pursued, which have proposed fuels based on local biomass such as wood chips and sorghum. Although this compound seems to be dependent on mesitylene, this at least leads to alternatives methods to pursue.

Comment Number: EPA-HQ-OAR-2022-0389-0141-0001

Commenter Type: Private Citizen

Commenter: Alan Levenson

Organization:

Excerpt Text:

Aviation has continued to develop and produce new planes designed to use leaded fuel. There is no excuse for this, especially considering there are safe unleaded fuels available.

Comment Number: EPA-HQ-OAR-2022-0389-0145-0001

Commenter Type: Trade Association

Commenter: Jim Coon

Organization: General Aviation Manufacturers Association, et al.

Excerpt Text:

The General Aviation industry supports an estimated \$247 billion dollars in economic output and 1.2 million jobs in the U.S. It provides a lifeline to many towns across the country and provides critical services in times of natural disasters such as hurricanes, flooding, wildfires and provided support for the nation's battle against COVID-19.

GA is served by more than 5,000 public-use airports, more than 13,000 private airports and air strips, and 5,500 heliports across the country. General Aviation provides essential air travel options to businesses and the public, forging links between thousands of companies, their suppliers, and their customers.

General aviation also protects our environment by providing the most efficient and cost-effective way to conduct such activities as wildlife surveys, aerial mapping of wetlands and detecting pipeline leaks.

Let me again reiterate the General Aviation industry's firm and collective support in removing lead from aviation gasoline, and any transition in pursuing this goal must be done safely and smartly.

The industry and the FAA have been working on this unleaded transition for many years. Congress has allocated more than \$47 million dollars to test and evaluate candidate fuels through the PAFI program - which stands for Piston Aviation Fuels Initiative.

As AOPA President Mark Baker has often stated, if this were easy it would have been done already.

Our industry has joined with the FAA and a broad coalition of organizations in the Eliminate Aviation Gasoline Lead Emissions initiative - or EAGLE.

EAGLE is designed to ensure that all stakeholders in the issue are coordinated and focused on the orderly and safe transition to a lead-free avgas future - just as you have heard from the previous speaker, Robert Olislagers, the Senior Coordinator of EAGLE.

It is important for everyone to know that significant progress is being made in identifying unleaded fuel solutions that will work for the entire general aviation fleet of piston powered aircraft.

To put some context around the amount of avgas being used each year -- which is about 180 million gallons - this amount of automotive fuel is burned on America's roads and highways in just four hours, each day.

Regardless, we all want a lead-free aviation system.

In fact, the FAA recently issued an authorization for the use of a 100- octane unleaded fuel developed by General Aviation Modifications Inc., -- known as GAMI -- of Ada, Oklahoma, for nearly all general aviation piston aircraft engines and airplanes. This was done through the Supplemental Type Certificate -- or STC -- pathway, and steps are now being taken to move this fuel through the commercialization process.

AOPA, select aircraft manufacturers, and others are planning to conduct demonstration programs with GAMI's G100UL fuel. And we plan to do so with any other FAA-authorized fuel.

In addition, Swift Fuels of Indiana is currently working through the FAA authorization process for its 100-octane unleaded avgas, and has said that it hopes to complete FAA certification in 2023. Swift already supplies its 94-octane unleaded fuel to a limited number of airports that have ordered it for use by those aircraft that can safely operate on a lower octane fuel.

Philips 66 and Afton Chemical, as well as LyondellBasel and VP Racing, also have unleaded fuel candidates being evaluated through the PAFI program, and progress on these fuels is being made toward FAA authorization.

Comment Number: EPA-HQ-OAR-2022-0389-0167-0003

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

(3) Arguments that ethanol cannot be used because it wears out engine components is misguided at best. Kits already exist for many aircraft to retrofit use for ethanol based fuel and do so at minimal cost. The only problem here is willingness, not an insurmountable restriction.

<https://afdc.energy.gov/files/pdfs/2896.pdf>

Comment Number: EPA-HQ-OAR-2022-0389-0194-0012

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Starting Minimal Initial Investment should be as simple as distributing, [italics: relatively] inexpensive, readily available, easily movable above ground fuel storage tanks or smaller Mobile trailer or truck mounted tanks making Fuel Storage for existing Unleaded Fuels widely available immediately.

This should be truly a “No Brainer”, especially when comparing the cost of fuel tanks to astronomical associated costs and delays of the current bloated wasteful bureaucracy laden National Plan of Integrated Airport Systems (NPIAS) & Airports Capital Improvement Plan (ACIP) AKA “Government Handouts” AKA “Aviation Welfare” AKA “FAA Life Support” replete with unmanageable massive size & complexity, outdated scope, slow-motion processes, silly non-sensical budget allocations and glacial timelines!

Surely makes many really wonder why so many aircraft can’t just utilize good ole Mogas. In a nutshell, Mogas which is otherwise known as motor gasoline or autogas, is used by ground vehicles, while Avgas AKA 100LL leaded Aviation Fuel with Tetraethyl Lead (TEL) is specifically developed for aircraft use. Part of the somewhat exaggerated or overblown excuse or process of supplying a single dedicated aviation fuel which involves stricter specification and higher quality control measures, e.g. higher cost plus ensuring “Aviation Safety” is maintained or mis-fueling so nobody gets confused as to which fuel tank they should pump from labeled with large RED warning stickers & placards, oh goodness me, way too complex.

SEE: 10 Mogas myths (html) 03-16-2011 — General Aviation News.

- Mogas has been an FAA-approved aviation fuel since the 1980s and has excellent safety record.
- 91 octane E0 Mogas has 3%-5% more BTUs/gallon than 100LL.
- PURE-GAS.org lists more than 17,700 Mogas sellers across the country in 2022.
- Fly Unleaded also provides Mogas availability details & maps.
- Perhaps not available at all retail stations, however many fuel terminals around the country sell ethanol-free fuels to airports, marinas, farms, etc.
- There are [italics: many creative low]-cost pump options, such as small military surplus type fuel trailers, or newer models available in sizes from 100 gallons to 2500 gallons or more. Aviation Fuel Systems (html) | U-Fuel has a line of smaller, self-service Sport Fuel stations ideal for GA airports wishing to add mogas.

SEE: New study shows Autogas [Mogas] can power 80% of piston aircraft (html) 07-12-2012 — General Aviation News.

- Study revealed that 127,168 fixed-wing and rotary piston aircraft can operate with autogas today under the EAA or Petersen STCs. This represents 80% of the 159,007 active aircraft in the latest General Aviation Statistical Database from the General Aviation Manufacturers Association (GAMA).
- Including E-ABs and LSA aircraft to those covered under STCs brings the total to 83% of all piston engine aircraft that could be operated today on autogas.
- Not counted here are several thousand ultralight aircraft, typically powered by two-stroke engines or the same powerplants found in modern LSAs (Rotax, Jabiru, etc.) that are generally run best on autogas.
- The bottom line: Somewhere between 80% to 83% of all active piston engine airplanes and helicopters registered in the U.S. could operate on autogas today, dramatically reducing the cost of flying and lead emissions from general aviation

Federal Aviation Administration (FAA) Hoisted by Their Own Petard

The US Federal guidelines for managing and maintaining the two Federal plans (NPIAS & ACIP) used for so-called airport development no longer represent a coherent logical objective Contemporary Strategy or Master Plan to accommodate the future of anything anymore and has devolved into a hopelessly antiquated “Tactical Short Term Agenda” driven & focused on a handful of ~30 mega airports complete with inadequate & outdated Air Traffic Control (ATC) [bold: PLUS] a totally subjective random patchwork of “Government Handouts”, Entitlements & Assurances seemingly driven & manipulated by Special Interests and Industry Lobbyist agendas AKA Airports Capital Improvement Plan (ACIP) AKA “Aviation Welfare”.

The almost decade old bloated unrealistic completely “out of touch” wasteful guidelines for NPIAS/ACIP contains all Commercial Service Airports, many unneeded “Reliever Airports” that have [bold: NEVER] been used as such, and selected [italics: subsidized] Public-owned General Aviation (GA) airports many of which are non-governmental privately owned Commercial Businesses and or airstrips expressly for Personal Hobby Sport Recreational Social Entertainment Venues, a key part of declining and irrelevant General Aviation (GA) “Aviation Assets”, a true tax burden provided for a handful of “Elite Users” unfairly, unjustly, unknowingly subsidized by ALL US taxpayers.

BTW: there is NO need to cut any corners, providing experimentation & development centers for deployment of existing Unleaded Fuels while laying the foundation for future air mobility needs is a worthy Long Term taxpayer goal with true ROI for the entire US. However, with millions & millions of Taxpayer Dollars wasted on self-perpetuating personal hobby, sport, recreational entertainment social venues, it’s time to cut ridiculous wasteful costs:

- Consolidate, downsize and “Right size” bloated, phony wasted Federal Aviation Administration (FAA) budgets justified with bogus local estimates of imaginary ROI. Anyone even remotely close to the industry has known this laughable truth literally for years, literally.
- No need for taxpayers to Subsidize or “Prop Up” or even distribute [bold: ANY] Unleaded Fuel(s) to unneeded, underutilized privately owned commercial businesses & facilities that [bold: can & should] pay their [bold: own] way!
- Divert ridiculous Federal Aviation Administration (FAA) funding, subsidies and guaranteed non-sensical invented “Assurances” to focus on back to basics “Targeted Investments”
- Preserve only what’s in the best interests of taxpayer with common-sense long-term goals, responsibilities and investments with true taxpayer ROI. Just ask any taxpayer or conduct a referendum on wasted Aviation related taxpayer dollars to get the truth!

It appears that NONE of the Federal Aviation Administration (FAA) Resources, Plans or Reports reveal anything more than a broad brush, 50 thousand foot overview of Goals & Strategies for 2023 “Alternative Fuels for General Aviation” activities. Of course, from the outside the situation appears to be all “Mom and Apple Pie” as expected with a complete lack of ANY Tactics or Implementation details anywhere.

- Federal Aviation Administration (FAA) Plans & Reports (html) |
- Aviation Gasoline (html) | Federal Aviation Administration (FAA).
- Eliminate Aviation Gasoline Lead Emissions (EAGLE) Initiative, last updated 12-14-2022.
- FAA, Industry Chart Path to Eliminate Lead Emissions from General Aviation by the end of 2030 (html) 02-23-2022.
- PAFI Piston Aviation Fuels Initiative, Future Unleaded Aviation Gasoline. EAA AirVenture July 25, 2017 (pdf)
- PAFI Piston Aviation Fuels Initiative - Future Unleaded Aviation Gasoline. EAA AirVenture 2015 July 21, 2015 (pdf)
- PAFI Piston Aviation Fuels Initiative - Future Unleaded Aviation Gasoline. Presented to EAA AirVenture, July 26, 2016 (pdf)
- PAFI Piston Aviation Fuels Initiative (pdf) 12-09-2013

Of course, NOBODY is gonna get it all right. Just need to nail the BIG stuff, once in a while, even just one, or even just part of one which has proven to be elusive for six decades and counting.

The problem does NOT appear to be the amount of money, amount of time, or the number of really smart people. However, the collective data, information & knowledge highlight the fact that a single Unleaded Aviation Fuel will most likely NOT be able to address ALL diverse operational and economic factors of ALL aircraft across ALL sites, ever, truly a FALSE misleading goal. 60 years, six decades appear to demonstrate there is just way too much uniqueness for any single solution to capture & address and that realization is starting to sink in. The general Public consensus inside and outside (pro & con) the industry seems to be that:

- They're NOT doing anything revolutionary
- They've been studying this issue for decades. Literally decades of studies and meetings
- Political agendas (multiple conflicts of interest) are the controlling factor, NOT the technology
- You can't get a straight answer out of anybody as to how this is REALLY supposed to work

However, a there might be a few clues provided in the Federal Aviation Administration (FAA) 2022 Annual Modal Research Plan (html) Last updated: Thursday, February 17, 2022 (pdf) 07-21-2021 | US Department of Transportation (US DOT). FY 2022 Annual Modal Research Plans, July 1, 2021, the FY 2022 Annual Modal Research Plans, Alternative Fuels for General Aviation (pg 49), Enacted (\$4,986,000) but it's not clear at all what was [italics: actually] accomplished by spending almost \$5 million Taxpayer USDs in 2022 alone.

What is even more distressing is directly spelled out in the abbreviated FY 2023 Program Descriptions, Alternative Fuels for General Aviation (pg 128):

Unfortunately, the aviation and petroleum marketplace, in concert with existing government regulations and policies, [bold: do NOT support a safe, orderly and economically viable fleet-wide transition to a new fuel or fuels], hence the need for the joint government and industry collaborative [Red Flag] initiative known as Piston Aviation Fuel Initiative (PAFI) [an abject failure]. The Alternative Fuels program collaborates with 40 different entities in this program. Its primary purpose is to serve as a vehicle in which unleaded fuel is broadly and safely introduced to the general aviation fleet [italics: if] research shows the fuel has the same level of safety as the existing leaded aviation gasoline. [What about Mogas?] Another purpose is to facilitate and spur continued private research and development of unleaded fuels for general aviation. The PAFI program itself does not develop, formulate, refine, or distribute fuel, the private sector does that [via "Government Handouts" AKA "Aviation Welfare" for the commercial business to capitalize and or monopolize]. Same stuff for the last six decades, right?

There are ZERO actual details as to what 2023 goals are or will encompass other than the usual gibberish and double-talk such as Anticipated Program Activities on pg 128, of course minus any [italics: real] commitments, [italics: actual] achievable timeline or concrete deliverables. Supposedly the "Transition" is going to happen on a "Wing and a Prayer" so to speak.

From the outside the FAA State of Preparedness, Planning and Readiness appears to be completely ad hoc, e.g. make stuff up as you go AKA "Fly by the Seat of Your Pants" AKA rely on perhaps faulty, warped, biased or outdated instinct rather than logic or knowledge. The actual issues have gotten way too large and complex for ANY single staff, department or branch of the government to adequately handle or even put their arms around to hunt for solutions.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0020

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

HOPA also assumed the EPA announcement would undoubtedly be immediately seized on and used by those Pro-Tetraethyl Lead (TEL) Provocateurs, Special Interest & Industry Lobbyist Progressively Anti-Science, Anti-Pregnant-Mom-Babies-School-Children groups like the General Aviation (GA) Tetraethyl Lead Cartel (GATELC) and their ilk. [Distant Star Wars Yoda Voice Echoing in the background: they descended on it like flies on poop they have].

In 2011, the FAA stood up an ‘unleaded avgas transition aviation rulemaking committee’ and in 2014 launched the FAA-industry Piston Aviation Fuel Initiative (PAFI), neither of which generated ANY significant results, both basically Taxpayer funded failures. In the real world you’d be fired, literally, for stuff like this that has failed once, let alone failed twice and is destined to repeat itself and fail again, or until the clock runs out, by 2030 or sooner, right?

The Federal Aviation Administration (FAA) Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative, a plan that details the elimination of leaded aviation fuel by the end of 2030 was only announced in February 2022 and will build on the failed PAFI program progress if you want to call it that, which is being way too generous, and it’s way too soon to measure any real progress or any Key Performance Indicators (KPIs) other than bluster and hot air tainted with TEL.

Special Interest & Industry Lobbyist phony community outreach AKA events, fly-ins, open houses and Flying Junk Piles (FJPs) have absolutely nothing to do with actual Community relationships, education or addressing Negative Aviation Impacts (NAIs) at all, and certainly ZERO to do with any Science Technology, Engineering, Arts and Mathematics (STEAM). While some so-called events are open to the public, most of these events are Kaffeeklatsch social gatherings, gossip parties, fly-ins AKA picnics & barbecues for closely knit Families & Friends that also receive any advertised scholarships funded with local personal money earmarked as such, as part of feeble Community marketing efforts. Nobody buys into this wishful thinking & garbage over the last 40 years other than a majority of owners, operators or those with related aviation commercial business interests.

This is yet another Lather, Rinse, Repeat of the decade old “Sky is Falling” Safety Defense Playbook whereby any [*italics: innocent*] member of the So-called General Aviation Fleet could carelessly choose amongst more than a single, one (1) that is, amongst a few, maybe four (4) or so Fuel Pumps and could create Mythical Hypothetical situations where aircraft could be mis-fueled by NOT READING Prominent LARGE RED STICKERS & PLACARDS, creating actual REAL safety and operational concerns. Wow, this is pretty pathetic indeed.

SEE “Sky is Falling”: There They Go Again: Oil Industry Opposition to Protecting Children from Toxic Lead Pollution (html) 02-11-2011 | Environmental Defense Fund (EDF).

Wow, NOW it’s 2022/2023 NOW it’s OK to propose, certify & add a total of FOUR alternative fuels, including GAMI G100UL and three others from Swift Fuels, Afton/Phillips 66 and Lyondell/VP Racing? So much for the phony excuses regarding the painstaking justification & efforts to avoid a:

“patchwork of airport-specific requirements leading to inconsistent fuel availability. That could create a situation where aircraft could be mis-fueled, leading to safety and operational concerns”

Just another “ Boo-Hoo, Woe is Me Moment” identical to the last six decades of complete Self-Contradictory acts of subterfuge, deceptive tactics and tricks, more obvious BS and lies.

Why at this late stage is Mogas NOT being included, considered again, or NOT considered to begin with? In fact Mogas is NOT even mentioned anywhere?

Mogas has been approved and in use for decades thus ALREADY meets all safety, technology, cost, is readily available with ZERO lead time, and has nothing to do with noise (?) in already established FAA

standards. Why NOT use Mogas? Anything other than an affirmative YES is additional obvious BS bunch of lies quietly looking to be swept under the rug yet again.

Comment Number: EPA-HQ-OAR-2022-0389-0194-0024

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[**Bold:** Taxpayers Still NOT Willing to Gamble with Pregnant Moms, Babies, School Children & Elderly! Where are the Material Safety Data Sheets (MSDS) for All Candidate Proprietary Unleaded Chemical Compositions (PUCCs)? What is ANY of This Stuff Made of?]

Are any of the available or soon to be available [italics: proprietary] fuels [italics: really] safe for Communities, densely populated neighborhoods and schools full of vulnerable populations including pregnant moms, babies, school children & elderly? Sorry, there doesn't seem to be any way to know. Once it's deployed it will be too late to find out won't it, or is that the intent? The latest expertly crafted ACRP only seems worried about "needed steps to accommodate and offer unleaded AvGas while maintaining 100-octane [sp] low-lead (100LL) availability" until 2030 or sooner, right? Of course, they're talking about "100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL)" and always seem to leave out the full name or identification, have spelling errors, malformed URLs, or other errors that help to hide or obscure info to escape human detection. Can't help but think much of this seeming carelessness stuff is really done purposely?

Of course, simply eliminating Tetraethyl Lead (TEL) does NOT mean there are no remaining dangers or hurdles in deploying Proprietary Unleaded Chemical Compositions (PUCCs) that are NOT tested for 'long term human exposure' in the Health, Safety and Welfare (medical) sense especially amongst densely populated neighborhoods close to schools, there's still much work to do to isolate any "Shiny New" lead-free panacea's. What about THAT testing? Are ALL of these efforts about only protecting Flying Junk Piles (FJPs) owners and operators?

The real questions is: how come NOBODY is studying Safety & Suitability of Long Term Human Exposure of any Shiny New Aviation Savior Sustainable Proprietary Unleaded Chemical Compositions (PUCCs) touted as the next Lead Free General Aviation (GA) Savior Fuel Chemical Mixture Du Jour?

Comment Number: EPA-HQ-OAR-2022-0389-0194-0030

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

[**Bold:** Slightly Forward to EPA's December 2022 Proposed Endangerment Finding Commercial Pilot / Media Editor-In-Chief SME Comments]

Transitioning to Unleaded Aviation Fuels (html) updated 12-13-2022 - Plane & Pilot Magazine. Getting the lead out of aviation fuel [bold: won't be easy], and the [bold: time to do it is short]. To recap:

-So when [italics: airport authorities] start using the presence of lead as an [italics: excuse] for shutting down airports, they are not entirely to blame.

-FAA issued a broad approval for the use of GAMI's 100UL in [italics: hundreds] of small planes. While this announcement might seem like an answer, it is only the start, as GA faces an uphill battle to make an

unleaded aviation fuel available fleetwide, and [italics: all] the [bold, italics: investment] that will take.
-It's an issue, by the way, that [bold : no one] in Washington [bold: except] the Environmental Protection Agency (EPA) cares much about.
-If you're shaking your head that this kind of industry-wide commitment is only happening now instead of [bold: decades] ago, you're not alone. Aviation is a dinosaur, insofar as our use of lead additives in our gasoline is concerned. [NOTE: General Aviation (GA) remains truly a 60s dinosaur considering many other factors including safety record, modernized equipment & accessories, average age of pilots & aircraft, etc.]
-Introduced a new fuel, which in a [italics: marketing coup] it named "100 Low Lead," which gave everyone the impression that the new fuel was a huge improvement. It wasn't. The new 100 Low Lead formulation was, in fact, lower in lead than only one of the fuels it replaced, and the name leads the public at large to assume that our low-lead fuel must have very small amounts of lead in it, but 100 LL has as much lead in it as auto fuel of the early 1970s.
-It was a lot less of an improvement in our lead emissions than you might think, if it was an improvement at all.
-So we find ourselves today, some 40 years and change down the road from when auto gas started to get the lead out, suddenly getting [bold: serious] about going to unleaded fuel. It's a bit much. The self-congratulatory tone, especially, is hard to take.

Yet another "Urgent Call to Action"! Time to do IT is short. Only [bold: eight] [italics: short years], about the sixth iteration, six decades, almost another full decade until 2030 or sooner, right? What is IT? Why, and for what reason(s) should IT be done? Whom should pay for IT? Sound familiar?

Another feeble attempt, this TIME seems serious NOW that Technological, Scientific and Medical Evidence & Proof have "Caught Up" with whining Pro-Lead Provocateurs & Freeloaders and their continuing lies that are NOW threatening THEIR non-essential non-strategic non-mission critical daily personal hobby, sport, recreational social entertainment aviation operations & leisure activities including the cozy convenient personal edification & enjoyment of the Elite Select Few paid for by many. And it certainly appears nobody is denying the self-pitying "Woe is Me" tell all confession that General Aviation (GA), along with the Federal Aviation Administration (FAA), bear the brunt of the blame for Aviation Tetraethyl Lead (TEL) Debacle.

However, nobody is [italis:actually] stepping up to accept or really do anything yet other than line up at the Federal Government Money Tree / Fountain / Trough to spend Taxpayer money, let alone ANY REAL [italics: responsibility or accountability] for the Aviation Tetraethyl Lead (TEL) Debacle. Aviation Industry, Special Interest & Industry Lobbyists continue deflecting, finger pointing & blaming everyone else certainly avoiding any appearance of legally accepting ANY [italics: responsibility or accountability] like the plague while "glad-handing" any mentions of Sustainability and "Moving Forward" simultaneously ignoring the enormous Aviation Tetraethyl Lead (TEL) [italics: ongoing] Debacle plus the environmental disaster that will remain silently swept under the rug, left behind of course for everyone else to clean-up.

The Tetraethyl Lead (TEL) Debacle Contamination & Casual Poisoning of Others HAS forced Taxpayers to look at Negative Aviation Impacts (NAIs) to untangle, decipher & determine the root cause, and whom is paying for ridiculous outdated technology & infrastructure AKA "Aviation Dinosaur" and closely examine the completely unimportant, unprioritized, non-urgent cavalier attitude towards slow-motion obvious common sense Tetraethyl Lead (TEL) poisoning of anyone nearby which has NOT mattered for the last six decades

Comment Number: EPA-HQ-OAR-2022-0389-0203-0010

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-Swift Fuels actively supports upgrading the nationwide training and technical awareness programs for airfields, fuel handlers, pilots, and communities on a local and national scale to eliminate misfuelling errors, manage intermixability issues, and operate piston aircraft safely and diligently. We actively work with NATA and other agencies to help inspire safe handling of fuel. Swift Fuels also believes that a multi-fuel unleaded avgas solution is unsafe, impractical for suppliers and handlers, and unsustainable as a long-term national strategy based on the current legacy fleet.

Safe & Smart Transition - Fleetwide

-Swift Fuels is actively working to deploy unleaded avgas safely across the nation to airfields with the proper infrastructure and operational guidelines to support unleaded fuel. Our teams have done this consistently since 2015 and will continue to expand access to UL94 unleaded avgas as part of our smart and safe deployment using our proprietary STC placards with local FAA-oversight and placing unleaded avgas in dedicated airfield tanks across the country. This STC certification practice will be followed in future months by an even broader communication program / deployment process once the high-octane avgas markets are introduced. This will then be followed by new regulatory decisions, the formalization of the risk assurance market, the stabilization of the avgas supply chain, and new avgas airport fuel handling and intermixability procedures to assure the operational risks are manageable and safe.

-Swift Fuels is actively working on a comprehensive program to satisfy all the FAA-certification requirements for a [bold: 100-octane replacement to 100LL (leaded) avgas] in order to make a fleetwide US deployment to unleaded avgas a reality within the next 3 years. The methods used for our 100R STC program are enriched by industry best practices. We are simultaneously working now to obtain an ASTM International fuel specification, regulatory, and broader OEM approvals. Our 100R fuel is forecast to enter the US market in 2023 which will begin our high-octane unleaded avgas transition program.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0006

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-Swift Fuels endorses the EPA's goal to eliminate lead emissions from the combustion of 100LL (leaded) avgas. Our company currently sells [bold: unleaded avgas] nationwide, and our plans call for the orderly elimination of 100LL across the US within about 3 years, with or without an EPA mandate. The media has reported that the current EAGLE/PAFI timeline for the replacement of 100LL is to be completed by 2030, which may reflect a more conservative posture given the unknowns of the older, more poorly documented legacy aircraft that may represent some 5-15% of the US fleet. Understandably, these aircraft may pose unclear liabilities to the industry for which the FAA is now contemplating a resolution. Our firm recognizes that this overall goal is a significant undertaking that will require a large amount of industry collaboration to communicate effectively and prevent errors or operational mistakes which can impact the lives of the pilots, the communities in which these aircraft fly, and the broader stakeholder community.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0008

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

Note that Swift Fuels is currently operating without any government mandate. That means our FAA/Industry approved fuels, accompanied by formal ASTM specifications, are only sold when pilots value our fuels to be superior to 100LL leaded avgas using their current airfield infrastructure of tanks and trucks. Our firm strives to be the low-cost producer of unleaded avgas – with the highest operational performance of any unleaded fuel alternative. Based upon our proprietary fuel testing, our premium grade fuels do not use aromatic amines (aggressive solvents) or MMT (toxic metals) because we believe these octane boosters do not reduce the cost or compress the timetable for a safe and smart fleetwide transition. Furthermore, we believe using either of these compounds in avgas imposes unnecessary risks to aircraft, pilots, and flight safety. Instead, our 100R unleaded avgas uses oxygenates that are specifically tailored for aviation use for complete combustion of the fuel. This results in the [bold: cleanest-burning unleaded avgas alternative possible with 100-octane performance], offering the most practical drop-in solution, thus providing the US market with the fastest, lowest toxicity, most sustainable, and most efficient transition to a commercially viable unleaded avgas solution fleetwide.

Comment Number: EPA-HQ-OAR-2022-0389-0203-0009

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: Swift Fuels, LLC

Excerpt Text:

-Swift Fuels supports market incentives for eliminating old, out-of-date airfield infrastructure pertaining to fuel tanks storing 100LL (leaded) avgas at various airfield locations across the US. Specifically, any airfield currently subject to EPA's state regulatory compliance requirements for certain underground fuel storage tanks paying fees and fines for LUST compliance should instead be incentivized to act and replace such infrastructure with proper AST's. This regulatory action would benefit all aviation stakeholders.

-Swift Fuels supports market incentives for supporting our 100R as a 10+% renewable fuel product. Our 100R product uses a low-cost oxygenate which is derived from bio-ethanol, and it has no aromatic hydrocarbons, thus resulting in the cleanest possible combustion of any known 100-octane avgas alternative. This clean exhaust is a key differentiating feature of our 100R avgas formulation because – unlike automobiles – piston-powered aircraft do not have catalytic converters to filter their exhaust emissions. We are exploring the possibility of petitioning Congress for a blenders tax credit on par with bio-diesel/SAF tax credits to last during the initial 3+ year transition to a fleetwide solution. This tax credit would be earned by our 3rd party fuel blenders to incentivize their participation in our unleaded avgas deployment.

Comment Number: EPA-HQ-OAR-2022-0389-0206-0010

Commenter Type: Advocacy Organization

Commenter:

Organization: Coalition for Sustainable Aviation (CSA)

Excerpt Text:

[Underlined: Reformulation of AvGas – There is no Silver Bullet]

Efforts have been underway for over a decade to find the drop-in replacement for a lead-free high-octane

AvGas. Both FAA, through the Piston Engine Aviation Fuels Initiative (PAFI), and the private sector have labored to find a fuel that will meet the specifications of ASTM D910, but to no avail. In 2022 FAA appears to have made some concessions for an alternative approach for a replacement fuel, namely through the issuance of a Supplemental Type Certificate (STC). General Aviation Modifications, Inc. (GAMI) was issued a STC for their patented fuel formulation trade marked as G100UL™. \

[Underlined: Three significant concerns are raised when considering an STC approach as a replacement for the 100LL AvGas in the market today.]

The first concern is the fact that aircraft engine manufacturers warranty the performance of their engines based on operating that engine with the ASTM specified fuel that is currently in use. An aircraft owner that uses an STC fuel has no recourse to the engine manufacturer should the STC fuel use damage the engine, or worse, contribute to an aircraft accident. The STC fuel is a “buyer beware, use at your own risk.” Long term use statistics are not and will not be available for the STC fuels for many years to come. Each pilot that will use the STC fuel is, in essence, transforming their aircraft into an experiment.

Second concern is that of sustainability. For instances, consider the recently issued STC for G100UL™. According to the patent application, the G100UL™ fuel maintains the 100 Octane value through the replacement of TEL with substantial quantities of Aromatics and Aromatic Amines. Aromatics are regulated and controlled substances in transportation fuel today and would almost certainly be regulated further in AvGas, should EPA be charged with it’s oversight. Aromatics are known to be carcinogenic, aromatic amines are toxic, and these compounds are under careful scrutiny today by many concerned citizens and government agencies. It is entirely conceivable that in the near future, should the agency adopt regulatory authority over aviation gasoline, that EPA would move to further regulate those fuel blend stocks just as they do today with automobile gasoline.

The STC approach creates a market of boutique fuels. The current direction of some in the industry appears to be that of developing drop-in replacements of various formulation of lead free high octane fuels. Unfortunately, since these fuels would not meet an industry accepted standard, none of these would meet the definition of fungible and would instead create a market of boutique fuels. A fungible commodity, like today’s 100LL or automobile gasoline, is indistinguishable from its manufacture and essentially identical in its formulation. There is an inherent safety concern when mixing fuels of various composition and formulation in the tank of an operating aircraft.

A market of boutique fuels is especially problematic when considering illiquid and inefficient AvGas market and distribution system that exists today. To further fragment this market will lead to higher costs, and the likelihood of outages. Fuel supply outages could conceivably lead to fuel exhaustion, while a pilot seeks to acquire fuel at an alternate airport, another safety concern that must be taken into consideration.

One final observation as it pertains to fungibility and mandating a fuel that can only be met with an STC is that of the experience gained from the implementation of Reformulated Gasoline (RFG) in California. Similar to the approach here, where fuel blenders are seeking and receiving patents, Unocal patented a formulation to meet (California Air Resource Board) CARB RFG that was infringed upon by virtually every refiner in the United States as they blended fuel to meet the new regulations for CARB summertime RFG. Supply chains were disrupted, costs were increased, and after millions of dollars in litigation, FTC eventually stepped in with charges of anticompetitive conduct in order to resolve the matter (FTC Charges Unocal with Anticompetitive Conduct Related to Reformulated Gasoline. – press release dated March 4, 2003). There simply is no way that general aviation industry could absorb such a setback as the transportation fuel industry did during the CARB RFG implementation. CSA encourages EPA and FAA to take this important time from history under consideration when developing plans for implementation of any proposed changes to the AvGas fuel system.

[Underlined: The AvGas market is much different than the automobile gasoline market.] Regarding bringing a new fuel to the market, it is worth noting that the AvGas market is quite small and illiquid, especially when compared to gasoline and diesel fuel markets. The fact is that numerous airports

throughout the U.S. have no fuel at all. Of those that do offer leaded AvGas, only 100LL grade is offered. A very small number of airports also offer ethanol-free motor gasoline (MoGas), perhaps no more than 5% of the airports. From a practical standpoint, the supply of AvGas today is limited to the single grade and almost always a single tank at the airport facility. This fact would point to the need for new tankage and infrastructure throughout the entire airport system in order to offer any additional grades of AvGas. The capital associated with building duplicate tankage and associated delivery equipment would prove to be expensive, a cost that would either drive GA business out or cause those that remain to incur greater operating cost. Not only would the capital cost to transition to a new lead-free aviation fuel be prohibitive, but the staffing and logistics to maintain duplicate systems would be challenging.

[Underlined: Misfuelling of aircraft engines can have major safety consequences.] A particularly concerning observation to be made from the phase out of lead from automobile fuel was the failure of engines due to misfuelling. During that period of time when both leaded and UL fuel were available at gas stations throughout the U.S. some drivers mistakenly placed leaded fuel in automobiles that now had catalytic converters installed. Over the course of time those catalytic converters would begin to plug, and in some instances automobile engines would fail. A very high risk of misfuelling exists today at those airports like Reid-Hillview and San Martin airports which have hastened to control lead emissions by banning 100LL AvGas from being supplied on the field. As an alternative, these airports do offer an unleaded grade of fuel, however the octane value is inadequate for high compression engines. Given no other option, it is conceivable that an uninformed pilot will make the mistake of placing the low-octane fuel in their aircraft. This presents a major safety concern due to the high likelihood of detonation when burning low octane fuel in a high compression aircraft engine. FAA recognizes and defines detonation in the FAA Airplane Flying Handbook (FAA-H-803-3A) as “The sudden release of heat energy from fuel in an aircraft engine caused by the fuel-air mixture reaching its critical pressure and temperature. Detonation occurs as a violent explosion rather than a smooth burning process.” Detonation is a very real concern and a safety matter that must be taken seriously when considering alternatives to 100LL AvGas. As stressed earlier in our comments, misfuelling an airplane has the potential for far more dire consequences than misfuelling a car.

Comment Number: EPA-HQ-OAR-2022-0389-0226-0004

Commenter Type: Fuel Manufacturer/Importer

Commenter:

Organization: General Aviation Modifications, Inc.

Excerpt Text:

Most non-pilots have an erroneous notion that the owner-operators of small general aviation aircraft just own, maintain, and operate those expensive examples of mechanically complex transportation vehicles as a hobby or for amusement. The reality is that the largest amounts of high octane 100LL avgas is consumed by owner-operators of those aircraft who are using those vehicles in order to enhance the overall and efficient functioning of the economy of this great country.

Our small, high technology, aviation company has spent millions of dollars in basic research and development over the past seventeen years to study the large variety of possible fuel chemistries that could be identified and tested to identify a workable and economically practical fuel chemistry to be used to replace 100LL. We have developed and constructed and operate the world’s most sophisticated aircraft piston engine testing facility. To the best of our knowledge, there is no other aircraft piston engine test facility in the world that has all of the capabilities that exist in our engine test facility, located on the airport in Ada, Oklahoma.

It is important to appreciate that the overall general aviation industry and, yes, even the major oil companies, have been diligently searching for a “workable” high octane unleaded fuel chemistry since the late 1980s.

In July of 2021, after twelve long, expensive, and difficult years of intensive FAA certification work, [Footnote 1: That GAMI/FAA certification effort involved, over the years, well more than 100 different senior FAA engineers and managers in order to oversee and properly review and approve the new high octane aviation gasoline fuel chemistry, G100UL avgas, which we invented] our company, GAMI, obtained the first FAA approval, ever, of a high octane unleaded aviation gasoline. We have chosen to label that unique aviation gasoline as “G100UL [Deletion: Reserved] Avgas”. That initial FAA approval was limited to a small number of aircraft and engines. The expansion of that approval to include the entire fleet of spark ignition piston powered aircraft awaited only the submission to the FAA of some routine additional test reports.

Unfortunately, the widespread publicity arising out of that early and limited FAA approval caused some precipitous actions by one or more local airport authorities in California. One of those well intentioned local airport authorities banned the sale of what continues to be the essential, existing, high octane leaded avgas (100LL), at midnight, December 31, 2021.

That airport authority took that action in spite of protests and cautions that banning the sale of existing 100LL before the G100UL avgas was able to be ramped up in production volumes and delivered to the airports in California would, inevitably, create a legitimate and predictable safety hazard for pilots of aircraft which require high octane aviation gasoline to safely operate.

The near tragic, but predictable result, of that precipitous action was a serious aircraft accident that occurred on July 22, 2022, when an aircraft (due only to the unavailability of 100LL at Reid Hillview Airport) departed for an intended short trip to a nearby airport to fill up the aircraft with 100LL. Unfortunately the fuel available on the aircraft for that short trip was insufficient and almost certainly was the cause of this accident.

[See original comment for photograph of aircraft accident, July 2022]

It is critically important for the EPA, to keep in mind, that if the EPA is precipitous in its plans and subsequent actions to eliminate the use of leaded aviation gasoline, then there will, almost certainly, during that transition period, be more of these types of totally unnecessary accidents. Heaven forbid an airplane ends up in a residential area, or worse, in a school yard. A tragedy like that would inevitably create a substantial amount of “finger pointing” at all of the involved governmental entities.

Because almost all of our efforts and resources were focused on the initial and essential FAA fleet- wide approval of our high octane unleaded aviation gasoline, we were unable to be distracted by, or to otherwise devote the required resources, towards the equally essential tasks involved in creating the very expensive “infrastructure” to qualify the necessary large scale industrial companies with the available resources to begin large volume production of our G100UL high octane avgas. That process could only be taken seriously by major refiners / blenders and other related infrastructure “assets” after and only after, we had first demonstrated an FAA regulatory fleet-wide approval for G100UL avgas. That long delayed fleet wide approval was granted by the FAA to GAMI on September 1st, 2022.

Today, as this is being written, we have secured the cooperation of one very large, well-known refining company, who has been actively engaged with us for a number of months to modify and to otherwise “ramp up” their internal production facilities to be able to assist in the production of large quantities of G100UL avgas. We now have in place a well-structured plan to “make that happen.”

G100UL avgas should be relatively easy to deploy, with no changes required to the local airport fuel tanks and delivery systems. By design, G100UL Avgas is completely fungible with 100LL. It can be mixed with 100LL in the local airport tanks and in the fuel tanks in the wings of the aircraft.

However, as you are undoubtedly aware, there are many aspects of our industrial economy that are under severe strain due to “supply chain” constraints. For that reason, this process of “ramping up” the production volumes of G100UL is going to require a period that will likely extend over the next two to four years. If the management in the EPA wishes, I will be glad to sit down and provide details to support the representations made in this comment to the docket, in order for the EPA to appreciate that we are not simply attempting to unnecessarily extend into the future the (already too long delayed) day when all 100LL gasoline will be gone from the airports in this country.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0006

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

Four high-octane unleaded fuels are currently in development and are moving toward FAA approval/authorization and market deployment. Each of these fuels attempts to address the critical safety need for high-octane aviation fuel using differing chemical approaches. As with all unleaded fuel technologies explored to date, each has unique advantages and disadvantages relative to one another. Aircraft and aircraft engines are type certificated by FAA as meeting all the applicable safety requirements for design, airworthiness, and operation.

Each type certificated aircraft and engine, by make/model, must be FAA approved to operate on any new or replacement fuel to ensure their continued operational safety. There are two paths available to obtain FAA approval for the use of a new fuel: (1) the traditional FAA aircraft type certification process and (2) the FAA aviation fuel fleet authorization process established by Congress in sec. 565 of the FAA Reauthorization Act of 2018. [Footnote 13: Pub. L. No. 115-254 (2018).] The second provides a pathway for fuel developers that are not traditional aviation organizations and as such do not have aviation experience and personnel to complete an FAA aircraft type certification program as prescribed in the Federal Aviation Regulations’ type certification process under 14 C.F.R. part 21. These two pathways that allow FAA to approve engines and aircraft to use a new unleaded fuel amounts to significant progress toward deploying a potential replacement for 100LL. It also marks the beginning of the complex work that remains to identify a commercial pathway for production and distribution necessary for the fuel to be viable in the marketplace and become available at airports across the country for purchase and use by aircraft operators.

Two fuel developers are pursuing traditional FAA type certification approval of a high- octane unleaded fuel: General Aviation Modifications Inc. (GAMI) and Swift Fuels Inc. On September 1, 2022, the FAA issued an Approved Model List Supplemental Type Certificate (AML STC) to GAMI for G100UL unleaded avgas. This AML STC represents the first FAA approval for the use of a high-octane unleaded fuel for general aviation aircraft and moves the industry a step closer to an unleaded future. The GAMI AML-STC currently includes a very broad range of type-certificated piston-powered fixed-wing airplanes and engines and the company is currently working with FAA to expand the approval to include type-certificated piston-powered rotorcraft. According to its website, GAMI anticipates that the availability of G100UL will expand nationally over a period of a few years as supply chain and associated infrastructure can be put in place and that 2023 will be a year of logistics to ramp up production and distribution to airports with G100UL avgas appearing more widely in 2024. [Footnote 14: “What is GAMI’s G100UL unleaded avgas?” <https://www.g100ul.com/> and “How long will it take in order for G100UL to be widely or routinely available?” <https://www.g100ul.com/faq.html>. 1/13/2023]

Swift currently produces and delivers a 94-octane unleaded aviation fuel to a limited but growing number of airports for those aircraft that can safely use a lower octane fuel. Swift holds an AML-STC FAA approval for UL94 fuel which each owner-operator can purchase and install on their individual eligible aircraft and engines allowing them to use UL94. Swift is also developing a high-octane unleaded fuel and has made application to the FAA and working through the type certification process to obtain an AML-STC for eligible aircraft and engines.

Swift has publicly stated that it hopes to achieve FAA AML-STC approval and have a 100-octane unleaded fuel ready to deploy for North America by the end of 2024. The scope of what portion of the U.S. fleet of piston aircraft and engines that may be covered by the initial AML-STC is not publicly known.

Partnerships between fuel producers Afton Chemical/Phillips 66 and LyondellBasell/VP Racing are each developing a high-octane unleaded fuel as potential replacements for 100LL. Both partnerships are working through the FAA fleet authorization process and are participating in the PAFI collaborative industry/government testing and evaluation program to develop the data necessary to support ASTM consensus production specification and FAA fleet authorization of their fuels. Both fuels have completed multiple phases of the PAFI test and evaluation program and are expected to enter the final stage of full-scale engine and aircraft testing in Q1-2023. With successful demonstration of applicable safety and performance requirements, FAA fleet authorization is expected in 2024/2025.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0008

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

UL 94 does not satisfy the octane requirements of high-performance engines and therefore is only approved for use in approximately 70% of the nation's fleet; it thus cannot be considered a 100% viable commercially available replacement for 100LL as it does not meet the operational requirements, nor is it approved for the entire spark-ignition piston engine fleet. As it is today with 100LL, the industry should expect multiple refinement and blending locations across the country to best support general aviation airports and the piston aircraft fleet. As this is not the case today, the current supply could result in adverse cost and supply impacts.

We have set an aggressive deadline for removing lead from aviation gasoline—and an equally aggressive work schedule to meet that deadline—because the general aviation industry recognizes the imperative for deployment of a replacement unleaded gasoline at the [Italics: national] level. Some well-intentioned but ill-advised local attempts to prematurely mandate removal of 100LL aviation gasoline threaten, at minimum, aviation safety and the success of collaborative FAA and industry initiative for a transition to an unleaded replacement that supports our national transportation system.

In 2022, there were 19,753 airports across the United States; 4,835 were public airports. [Footnote 16: Fed. Aviation Admin., FAA Fact Book, at <https://www.faa.gov/newsroom/faq-fact-book>.] And already the sponsor of two of them—Santa Clara County, California—has attempted to arrogate to itself the authority to ban leaded aviation gasoline. [Footnote 17: See, e.g., Gabriel Greschler, “‘Jumping the gun’: Pilots, flight instructors say Santa Clara County’s switch to unleaded aviation fuel was just an ineffective ploy,” San Jose Mercury News (Jan. 24, 2022), available at <https://www.mercurynews.com/2022/01/23/jumping-the-gun-pilots-flight-instructors-say-countys->

switch-to-unleaded-aviation-fuel-was-just-an-ineffective-ploy/.] Similar efforts in other municipalities are likely, notwithstanding the EPA’s and the FAA’s strong field and express preemption with respect to regulation of clean air and aviation safety, respectively, as well as preemptive Federal requirements regarding the operation of airports and prohibition on discrimination among users. [Footnote 18: See, e.g., 49 U.S.C. [Section] 47107(a)(1).] The national airport system is based on a statutory scheme in which Congress has required the FAA to develop a national plan of integrated airport systems “to provide a safe, efficient, and integrated system of public-use airports adequate to meet the needs of civil aeronautics [and] to meet . . . national defense requirements.” [Footnote 19: Id. [Section] 47103(a) (emphasis added).] Moreover, by statute, the FAA Administrator is charged with development and maintenance of a Federal aviation system. [Footnote 20: Id. [Section] 40101(d).]

Our airport infrastructure is Federal in nature because aircraft cross county and State lines in flight, and pilots must be assured that, in the event of an unplanned or emergency landing at the nearest suitable airport, the diversion airport has not imposed a premature local restriction on the dispensation of leaded aviation fuel. Such a local restriction could have the unintended consequence of promoting poor decision-making and diversion to a more distant airport where an industry-standard fuel supply is assured.

Comment Number: EPA-HQ-OAR-2022-0389-0227-0009

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

The general aviation community remains committed to removing lead from aviation gasoline by the end of 2030 – and it may be sooner. The general aviation community also recognizes that lead is detrimental to human health, and that the communities surrounding airports should not bear a disproportionate burden. But we cannot compromise the safe and efficient operation of the fleet of aircraft, or economically destroy the United States general aviation transportation infrastructure, by prematurely removing an essential fuel that many aircraft require for safe operation. In the absence of readily-available and safe substitutes, EPA, the FAA, and the general aviation community must work together to ensure safe and efficient transition to lead-free fuels.

Comment Number: EPA-HQ-OAR-2022-0389-0268-0019

Commenter Type: Advocacy Organization

Commenter:

Organization: Petitioners

Excerpt Text:

The availability of alternative fuels means that a ban on leaded avgas is now possible. An unleaded 94-octane fuel has been on the market and available for years, and this fuel can be used in approximately two-thirds of all piston-engine aircraft. [Footnote 103: Transp. Rsch. Bd., Nat’l Acads. of Scis, Eng’g, & Med., Options for Reducing Lead Emissions from Piston-Engine Aircraft 3, 93 (2021), <https://nap.nationalacademies.org/read/26050/chapter/1>.] The remaining third of aircraft that rely on higher-octane fuel also have an alternative fuel: The FAA recently granted approval to a high-octane unleaded avgas, G100UL, that can be used in all aircraft in the fleet. The manufacturer, General Aviation Modifications, Inc., recently said that it will be able to start delivering the fuel this year and will be able

to deliver it fleetwide within three years. A competitor, Swift Fuels, expects to be able to bring its 100-octane unleaded fuel to market in the middle of 2023 and expects it to be price competitive with existing fuels. And as Robert Olislagers from FAA’s EAGLE partnership program recently explained, two additional unleaded fuels are in development. [Footnote 104: See Presentation of Robert Olislager, Accelerating the Transition to Lead-free Skies at 1:52:33–44 (Dec. 15, 2023), in Quiet Communities Presents the “Quest for Quiet” Lunchtime Conference Series, Quiet Communities, <https://quietcommunities.org/lunchtime-conferences/accelerating-the-transition-to-lead-free-skies/> (last visited Jan. 17, 2023) (“We have three other fuels that are in the hopper as well, with . . . the Swift fuel likely having their STC coming up . . . in 2023.”); cf. Baker, *supra* note 102 (“The FAA also continues its testing and evaluation program known as the Piston Aviation Fuel Initiative (PAFI), and two fuel candidates are going through that process.”).] EPA should ensure that this progress continues and use its regulatory powers to expedite the transition away from leaded avgas that is already happening. Given the rapid development of alternatives to leaded avgas, and in order to fulfill its directive to protect public health and welfare, this Administration must move forward with a ban.

Comment Number: EPA-HQ-OAR-2022-0389-0771-0002

Commenter Type: Trade Association

Commenter:

Organization: National Agricultural Aviation Association (NAAA)

Excerpt Text:

Currently there is only one fuel supplier who recently obtained approval for an unleaded aviation gasoline that can be used in all the spark ignition reciprocating piston aircraft engines. On September 1, 2022, General Aviation Modifications Inc (GAMI) received FAA approval for their G100 unleaded aviation gasoline. Representatives of GAMI have said that it would take several years to ramp up production and distribution of G100UL. There are other fuels in development, but they are further behind than GAMI and would take longer to bring to market.

An FAA sponsored group (EAGLE) Eliminate Aviation Gasoline Lead Emissions Group was started in February of 2022. EAGLE is not expected to finish its work until 2030. This group needs to be allowed to develop its work before leaded aviation fuel is removed from the market.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-001-0002

Commenter Type: Professional Association

Commenter: Robert Olislagers

Organization: Senior Coordinator of the FAA-Industry EAGLE program

Excerpt Text:

EAGLE is comprised of four pillars to achieve a lead-free industry. Two pillars are managed by industry, the first is focused on identifying the tasks that must be accomplished to allow unleaded fuels to be offered in the market. The second is focused on research and development and innovation, the other two pillars are managed by the Federal Aviation Association and focus on test and evaluation of candidate unleaded fuels and related to regulatory and policy objectives. In addition, there are two tracts available for FAA safety review and authorization. First the traditional supplemental type certificate process or STC. An STC insures that any changes to aircraft and engine designs continue to comply with the applicable airworthiness requirements. The second is an industry government program called Piston Aviation Fuels Initiative or PAFI, which is focused on generating the necessary airworthiness data for the FAA to issue a fleet authorization. Major progress towards obtaining a lead-free environment currently underway includes four high octane unleaded fuels and development towards FAA authorization. Each of

the candidate fuel providers pursue lead free high octane AVGAS using different formulas while maintaining the performance properties necessary for safety. Just two months ago, the FAA issued an STC to General Aviation Modifications, Inc. or GAMI for their G100UL unleaded AVGAS. It is the first FAA authorization of a high octane unleaded fuel for a large segment of the general aviation fleet. This moves the industry a step closer to an unleaded future. Swift Fuels, Inc. is also close to completing tests and evaluation for its 100 octane fuel with the goal of receiving an STC in 2023. Swift Fuels already makes 94 octane unleaded fuel available in the marketplace today. In addition, two high octane unleaded fuels are being tested through PAFI involving Afton Chemical and Phillips 66 as well LyondellBasell and VP Racing. Both candidate fuels have made significant progress and expect to begin full scale testing towards FAA fleet authorization soon. To make a successful transition, however, it is critical to the safety of the general aviation fleet to maintain 100 low lead aviation or 100 low lead aviation fuel available until unleaded fuels are widely available throughout the national airport system. The general aviation sector includes some 20,000 landing facilities in the United States including more than 5,000 public use airports. It has a fleet of more than 220,000 aircraft used for such diverse activities as firefighting, recreational use, search and rescue, flight training, law enforcement, emergency management, and serving rural and remote areas to name a few. The industry supports more than \$1.2 million and contributes more than \$247 billion in economic impact annually.

Comment Number: EPA-HQ-OAR-2022_0389-0431-0001

Commenter Type: Private Citizen

Commenter: Peter Wang

Organization:

Excerpt Text:

I understand the difficulty in replacing leaded gas for planes. However, it has been many years that we have known about this issue and progress has been slow to negligible. Adopting an "endangerment finding" is likely to spur efforts to find an acceptable substitute for leaded avgas, and/or accelerate the phase-in of planes that work well with unleaded avgas. There is at least one promising unleaded avgas approved by the FAA, G100UL

Comment Number: EPA-HQ-OAR-2022_0389-0729-0001

Commenter Type: Private Citizen

Commenter: Paul Scudder

Organization:

Excerpt Text:

I am a chemist who lives within walking distance of an airport. Small planes fly over my neighborhood all the time. I am astonished to hear we are still using lead in aviation fuel for small planes. Leaded gas is just cheaper gas made to burn better by adding lead, a known toxin. This is a clear case of oil company profit at the detriment of our health and our environment.

Comment Number: EPA-HQ-OAR-2022-0389-0198-0002

Commenter Type: Advocacy Organization

Commenter:

Organization: How The West Was Saved

Excerpt Text:

“Evidence is accumulating that unleaded fuel could be more damaging than leaded. Unleaded fuel may be causing new waves of cancer and making a profound contribution to environmental degradation.

While declines in the amount of lead in the air are positive, the alternative to lead is not pretty either. Unleaded petrol costs more to make than leaded fuel, results in the use of more oil and creates more pollution, because of the aromatics.

Unleaded fuel is 50% aromatic additives — they are the replacements for lead. They are dimethylbenzene, mesitylene, toluene, xylene and benzene. Each is a carcinogen. They are called volatile organic compounds (VOCs). Tests at the Institute of Oncology in Bologna, Italy, found that fuel additives benzene, toluene and xylene produced cancerous tumors when ingested or inhaled. Benzene is particularly harmful, and is linked with childhood leukemia.

Recent statistics from Sweden in 1993-4 show that service station workers had unexpectedly high rates of leukemia. Unleaded fuel being pumped into a tank releases aromatic compounds. You are at high risk from benzene and other VOCs at the service station. It is most important to avoid inhaling petrol fumes at the service station and at home.” Unleaded petrol: a solution or a problem? | Green Left

“Koch was before his time and could not have anticipated the rapid growth of aviation worldwide and the impact that aviation noise would have on health. In October 2018, the World Health Organisation (WHO) published its long awaited new guidelines for environmental noise. [1] The guidelines make source-specific recommendations for noise from aviation, as well as road, rail, wind turbines, and leisure. They include tough new lower thresholds set for aviation noise, reflecting the growing body of evidence about the harmful effects of noise on health.”

“Although well recognised as an environmental harm, there is now considerable recent literature on the adverse health effects of noise on children’s education and cardiovascular disease. The RANCH study conducted among primary school children near major airports in Europe, matched for socio-economic status, reported that chronic exposure to aircraft noise has a negative effect on children’s reading and learning outcomes [3]. A study from Germany has not only confirmed these findings, but also showed that children with language or retention disorders, or who are learning in a second language, experienced more impairment [4]. Studies near Heathrow schools indicate that even double glazing is insufficient for noise insulation [5].” The harms to health caused by aviation noise require urgent action - The BMJ

Noise pollution is harmful to animals, it has been linked to hearing loss, dementia, and heart disease. We have to design smarter communities that aren’t dealing with ongoing noise & fuel pollution. We have to create on-the-ground transportation systems that allow us to reduce the number of flights taken, especially in between cities that are close.

It is IMPERATIVE that we all continue to collectively do the work to advance the science and health of the COLLECTIVE! It is IMPERATIVE that we commit to taking better care of other species, humanity, and the EARTH!

Comment Number: EPA-HQ-OAR-2022_0389-0573-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Heidl

Organization:

Excerpt Text:

Research on the irreversible dangers of lead to humans, especially children, is irrefutable. The endangerment finding is decades overdue! The 130,000 piston engine aircraft that run on leaded avgas have continued to pollute our air for nearly 3 decades after leaded gas was eliminate for automobiles.

Unleaded avgas is available today and will work safely for more than half of the piston engine aircraft in operation. Make the endangerment finding so that we can begin reducing lead in our environment!

Comment Number: EPA-HQ-OAR-2022-0389-0194-0002

Commenter Type: Private Citizen

Commenter: Matthew Grisius

Organization:

Excerpt Text:

Tetraethyl Lead (TEL): Brief History

Inside the 20-year campaign to rid the world of leaded fuel (html) 08-30-2021 | United Nations Environment Program (UNEP). The World realized one major problem: leaded exhaust is toxic. As leaded fuel spread to every corner of the world, it was followed by epidemics of heart disease, cancer, stroke and, most vividly, developmental delays in children.

Era of leaded petrol over, eliminating a major threat to human and planetary health (html) 08-30-2021 | United Nations Environment Program (UNEP). The end of leaded petrol follows a 19-year campaign led by the UN Environment Programme (UNEP) and partners. Official end of use of leaded petrol will prevent more than 1.2 million premature deaths and save USD 2.45 trillion a year.

Leaded Gasoline Use in Vehicles Has Now Officially Ended Worldwide (html) 08-31-2021 | Smart News| Smithsonian Magazine. A refinery in Algeria used the world's last stockpile of the fuel.

After [bold: 99 years], the world officially eliminated the use of leaded gasoline as gas stations in Algeria stopped offering leaded fuel, the UN Environment Programme (UNEP) said this week, calling for an accelerated transition to zero-emission vehicles [automobiles].

A century of tragedy: How the car and gas industry knew about the health risks of leaded fuel (html) 12-09-2021 | Phys.org. It has been 100 years since that pivotal day in the development of leaded gasoline. Expert comments as a historian of media and the environment, see this anniversary as a time to reflect on the role of public health advocates and environmental journalists in preventing [italics: profit-driven tragedy.]

Leaded petrol is gone – but lead pollution may linger for a very long time (html) 09-06-2021 | Phys.org. The consensus around leaded fuel's unacceptable threat to human health was hard won, entailing a long fight between scientists, regulatory authorities and industry. In a recent ray of good news, it seems the world has finally turned a corner on the use of this toxic chemical in fuel. As of July 2021, the world has officially eradicated leaded fuel according to the UN, meaning it's no longer sold for [italics: cars] and [italics: lorries] anywhere in the world. Lead does NOT [italics: biodegrade or disappear] over time. It can remain in soils for thousands of years, where it can be blown back into the atmosphere. It's worth noting that today's airborne concentrations of less than 10 nanograms per cubic metre appear to be small compared to the average of greater than 1,000 in the 1960s. But there is strong clinical evidence that low-level exposure to lead can affect the development of the brain and nervous system in children, resulting in impaired cognitive function, attention and behavioral problems. No safe level for lead in children has been identified, and the air is just one source—it can also linger in old pipes, toys and paints.

Cumulative leaded automotive gasoline use is historically estimated at 76 trillion gallons — releasing 8 million metric tons of lead into the environment. NOTE: this unbelievable number only includes historical “Automotive” usage! While INNOSPEC » Octane - INNOSPEC. The LAST & FINAL company producing Tetraethyl Lead (TEL) on the entire planet actively continues to profit & dupe the world with “Responsible Tetraethyl Lead Supply and Stewardship”, seriously, is this for real?

Tetraethyl Lead (TEL): Still the World's Best Kept & Most Protected Aviation Secret in the US

However, August 30, 2021 is the [bold: ACTUAL] day the world stopped use of leaded gasoline [bold: ONLY] for land based transportation using Automobiles, Trucks & Motorcycles. One of the BEST kept Health, Safety & Welfare secrets: General Aviation (GA) airports around the United States still provide [italics: enormous] amounts, hundreds of millions of gallons of 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) AKA Avgas fuel for piston-engine aircraft including piston-engine helicopters. Use of Leaded aviation gasoline AKA Avgas AKA 100LL Leaded Aviation Fuel with Tetraethyl Lead (TEL) continues openly unchecked, unabated and protected in aviation.

Many indifferent irresponsible aircraft owners, operators, pilots (1/3) and related Special Interests & Industry Lobbyists still tout benefits of a known Toxic Poison they believe outweigh identified well known dangers of Tetraethyl Lead (TEL), GM's Midgley's Mighty invention, stalling as long as possible. While many other responsible aircraft owners, operators, pilots (2/3) are shocked, dismayed and appalled at the blatant acquiescence, artificial delays & inaction and are tired of continuously bearing the brunt of the cost and blame for poisoning Millions, e.g. "Paying the Exorbitant Price(s)" on behalf of Society!

Comment Number: EPA-HQ-OAR-2022_0389-0388-0001

Commenter Type: Private Citizen

Commenter: Dennis DeMuth

Organization:

Excerpt Text:

What is so important about leaded petroleum that airplanes need so badly that justifies the impacts to peoples' health and our ecosystem? Is there a technical reason or is it just inertia to change and added cost? [FL TEXT REMOVED] Sincerely, Dennis DeMuth Friday Harbor, WA 98250

Comment Number: EPA-HQ-OAR-2022_0389-0653-0003

Commenter Type: Private Citizen

Commenter: Kerr Bisch

Organization:

Excerpt Text:

o The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions.

Comment Number: EPA-HQ-OAR-2022_0389-0656-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Lead is added to avgas to prevent engine knock, which can pose safety problems during flight. Avgas is the last remaining leaded transportation fuel in the United States, where about 167,000 mainly small piston-engine aircraft use it, according to the Federal Aviation Administration (FAA). Aircraft that use Jet-A and Jet-A1 fuel do not contain lead in the fuel itself. Commercial jet fuel consists of kerosene, which is also a fossil fuel. Let's face it, certain forms of transportation require fossil fuels.

Comment Number: EPA-HQ-OAR-2022-0389-0257-0005

Commenter Type: Local Government

Commenter:

Organization: City of Middleton, Wisconsin

Excerpt Text:

On a local level, we are strongly committed to helping the aviation industry transition away from 100LL fuel to the new unleaded fuel once it is commercially available. To this end, on November 15, 2022, the Middleton City Council authorized the purchase of a used 1,200-gallon fuel tanker truck at a cost of nearly \$50,000 to allow the Middleton Airport to offer a 94-octane, unleaded fuel (94UL) alternative for those airplanes that can utilize it, until a 100UL fuel option is available to replace the existing 100LL fuel. We expect the fuel tanker truck to be ready for transportation to the Middleton Airport by the end of January and have already established the necessary account with the 94UL distributor to begin receiving the 94UL fuel once the tanker truck is on the airport property. Once we have 94UL fuel available at the airport, we will create a very safe program to assure that only planes that can safely use 94UL fuel can use it. Although the Middleton Airport cannot cease sales of the 100LL fuel until the 100UL fuel is commercially available, we believe that offering the 94UL alternative option is an important step in supporting the general aviation industry transition to fully unleaded aviation fuel.

City officials take the transition to unleaded aviation fuel seriously. The City of Middleton is working diligently to determine how to receive distribution of 100UL or other similarly approved unleaded fuel at the airport as soon as it is commercially available, and we believe a finding of endangerment and promulgation of nationwide standards and rules will expedite this transition.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0009

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

we recommend EPA use existing research capacity at the University of Alaska to help research and develop technology and to ensure it is workable in Arctic climate conditions and at high elevations.

Comment Number: EPA-HQ-OAR-2022_0389-0732-0003

Commenter Type: Other

Commenter:

Organization: Broadway Flushing Homeowners Association

Excerpt Text:

It is imperative that we transition to lead-free aviation fuel as quickly as possible to protect the health of children and the public.

Comment Number: EPA-HQ-OAR-2022-0389-0199-0004

Commenter Type: Private Citizen

Commenter: Howard Mielke

Organization:

Excerpt Text:

Because the same pipelines transport both avgas and unleaded mogas, there is a rule allowing up to 0.05 g lead per gallon of unleaded mogas (Cabrera, Yvette, 2017). Knowing the consequences of allowing lead additives in mogas, this allowance is unacceptable.

Comment Number: EPA-HQ-OAR-2022-0389-0265-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: Alaska Community Action on Toxics (ACAT)

Excerpt Text:

In the United States, the use of leaded gasoline in automobiles was finally banned in 1996. The banning of leaded fuels used in vehicles eventually resulted in a 98% decrease in the total atmospheric lead level (Kessler, 2013). There is no compelling reason why avgas can't follow a similar trajectory by phasing out lead use.

Today, the U.S. is in a promising position to phase out and ban lead in avgas—in fact this is critical and long overdue. There are several viable unleaded avgas alternatives that are both safe and effective and will work in most small single and twin piston aircrafts. For example, General Aviation Modifications, Inc (GAMI)'s G100UI high-octane unleaded fuel was recently approved for use by the FAA for the US's fleet of small piston airplanes (Cabrera, 2022). Alternative, small aircraft engines exist that work safely and effectively with unleaded avgas, such as Continentals 360 Series AvGas Engine, that can be fitted into aircrafts (Continental, n.d.).

Comment Number: EPA-HQ-OAR-2022-0389-0244-0003

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

We want to focus on Alaska aviation and our dependence on 100 low lead aviation gasolines (100LL avgas). Alaska encompasses over 365 million acres and is the largest state in the union. Within our vast state, many communities are not on the road system and are only accessible via air travel. A large majority of the aircraft used to serve these small, rural communities are piston-engine aircraft that burn 100LL avgas, due to their ability to land on short, gravel runways. In many locations, large piston-engine aircraft are the only means by which Alaska's residents and businesses can receive freight and fuel. Air travel and air cargo are necessities for sustaining life in rural Alaska. Access to medical facilities and other essential goods and services typically involve travel by piston-powered aircraft. Aviation is a critical industry in Alaska and employs a notable percentage of state residents. While there are some avgas alternatives that show promise, many concerns exist surrounding the long-term viability of the alternatives in an arctic climate. Several aircraft components (ignition systems, fuel bladders, hoses, and o-rings, among others) have the potential for unintended reliability impacts from alternative fuel options.

There are currently no alternative aircraft suitable for moving cargo and fuel throughout Alaska, and the absence of a comparatively priced substitute fuel available for widespread use will irreparably damage Alaska's ability to provide essential care and services to its residents. Aviation is essential to Alaska, and 100LL avgas is essential to our aviation system. Alaska is concerned about the immediate impact to human health and wellbeing if 100LL avgas becomes unavailable, as the lack of comparatively priced substitute fuel available for widespread use will make goods and services less accessible, if not unavailable, to Alaska's rural communities.

Comment Number: EPA-HQ-OAR-2022-0389-0244-0002

Commenter Type: State Government

Commenter:

Organization: Alaska Department of Environmental Conservation

Excerpt Text:

Finalization of the rule as proposed without the existence and availability of a viable alternative fuel would turn thousands of piston-engine aircraft in Alaska into scrap, render billions of dollars invested over decades in airport infrastructure useless, devastate Alaska's economy, destroy thousands of jobs, and strand hundreds of Alaskan communities and their residents without transportation or supply alternatives. It would truly be a disaster. Hundreds of Alaskan communities cannot be reached by road and rely on piston- engine aircraft to deliver medicine, fuel, and food. Teachers, state troopers, physicians, dentists, students, contractors, and residents all rely on these same aircraft for access in and out of a community. As one rural resident stated: "If we didn't have our airport, we wouldn't have anything. The airport is a fact of life for living out here in the villages. The airport is our road, highway, ocean - our lifeline."

Comment Number: EPA-HQ-OAR-2022-0389-0227-0001

Commenter Type: Trade Association

Commenter:

Organization: General Aviation Manufacturers Association (GAMA), Aircraft Owners & Pilots Association (AOPA), Experimental Aircraft Association, (EAA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Industry (API)

Excerpt Text:

Our nation is served by more than 5,000 public-use airports, more than 13,000 private airports and airstrips, and 5,500 heliports across the country. General aviation is an integral part of the transportation system that supports communities across the United States, especially in rural areas, by providing essential air travel options to businesses and the public, forging links between thousands of companies, their suppliers, and their customers. General aviation operations include emergency medical personnel and supplies delivery, disaster relief and recovery, search and rescue, agricultural aviation activities, recreational pursuits, and more. General aviation also protects our environment by providing the most efficient and cost- effective way to conduct such activities as wildlife surveys, aerial mapping of wetlands, and detecting pipeline leaks.

Response to Comments on the Aircraft Industry

Some commenters submitted comments on various aspects of the aircraft industry and the development of unleaded fuels in that industry, including raising concerns about unleaded fuel availability and safety for pilots and passengers, as well as matters of industry research and development of unleaded aviation fuel. Other commenters expressed concerns regarding the impacts to peoples' health and our ecosystem from the ongoing exposure to lead when unleaded fuel options are available

In response, the EPA acknowledges the information commenters submitted regarding unleaded fuels being developed, or available now, for use in covered aircraft. We also acknowledge the background information some commenters provided, including the comments stating concerns about unleaded fuel availability and safety for pilots and passengers as well as matters of industry research and development of unleaded aviation fuel. These comments are outside the scope for this action and thus require no

response, as the EPA did not propose, solicit comment on, and is not finalizing any regulation related to unleaded fuels in this action. As described in Sections III.A and III.D of the final notice for this action, as well as elsewhere in this RTC document, in this action, the EPA is addressing the predicate to regulatory action under CAA section 231 by making an endangerment and a cause or contribute finding in proceedings that are separate and distinct from any follow-on regulatory action.

In response to comments suggesting that final endangerment and cause or contribute findings will expedite the transition to unleaded fuels, we note that while there are currently options for reducing lead emissions from covered aircraft, and the FAA with industry have programs underway to transition the fleet to an unleaded future, industry's current independent, voluntary behavior, and industry's potential future action or inaction in response to the outcome of the EPA's final determination, is immaterial to this final action, which is limited to determining whether lead emissions from covered aircraft engines cause or contribute to air pollution which may reasonably be anticipated to endanger the public health and welfare within the meaning of CAA section 231(a). Similarly, comments related to these FAA and industry programs are beyond the scope of this action and thus require no response.

In this section of the RTC, the EPA is focusing on comments related to the aircraft industry and the development of fuels in that industry. The EPA responds to other aspects of these comments elsewhere in this RTC document and in the final notice for this action. For example, for responses related to comments about EPA's legal authority and the establishment of lead emissions standards, please refer to Section 7 of this RTC document. Comments regarding the endangerment finding, including comments related to lead pollution and human health and the environment, are addressed in Section 5 of this document, and comments regarding the cause or contribute finding are addressed in Section 6 of this document. The EPA responds to comments related to FAA in Section 8.3 of this document. Responses to comments regarding economic and related consideration are located in Section 8.4 of this document.

Section 9. Other Comments

Comment Number: EPA-HQ-OAR-2022_0389-0506-0001

Commenter Type: Private Citizen

Commenter: Richard Rogers

Organization:

Excerpt Text:

We are not ready as a nation to transition to green energy. Emissions on aircraft have improved since the 70s.

Comment Number: EPA-HQ-OAR-2022_0389-0331-0001

Commenter Type: Private Citizen

Commenter: Alan Feltman

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Stop poisoning the environment!

Comment Number: EPA-HQ-OAR-2022_0389-0511-0001

Commenter Type: Private Citizen

Commenter: Liz Szabo

Organization:

Excerpt Text:

[FL TEXT REMOVED] I am sick the power that all the entrenched industries hold over everyone just because they basically have limitless amounts of money to ensure they are and nothing else can be. Which means that they have silenced all other modes of energies and until the American lawmakers can get together and take away all their powers nothing will change and sadly conservative lawmakers have sold their souls for money as have judges nationwide and conservative federalist scotus. Until Americans oust these judas' Americans will continue to suffer and America will decline. Americans need to stop believing the lies spews by the conservatives in power and vote them out and then ensure they will never again be able to gain such positions. Sincerely, Liz Szabo Mchenry, IL 60051

Comment Number: EPA-HQ-OAR-2022_0389-0403-0001

Commenter Type: Private Citizen

Commenter: jeremy fryberger

Organization:

Excerpt Text:

If human beings are the most intelligent species to ever inhabit Earth, then why has no other organism that so vastly populated the planet initiated its own downfall-and undermined or eliminated so many other species? Why do we allow ourselves to engineer such destruction? Unlike every other living thing, homo sapiens has long been able to quickly dodge nature's balancing forces-i.e. disease, famine, etc. As such, the best to which humans can aspire is to live in a nature-sustaining manner. And, key to this goal is clean, sustainable energy/environmental policy. Meanwhile, former President (and lifelong POS) Donald Trump, plus his administration's staggeringly corrupt personnel, his elected/ unelected Republican Party boot-lickers/toadies/enablers (at all levels of government), his sleaze-covered campaign staff and greasy crime family, his stereotypical multi-bigoted, enormously insecure, self-interested supporters, the right's propaganda/disinformation operations, and conservatism's wealthy/plutocratic/fascism-adjacent puppeteers/paymasters constitute an ongoing disaster, not just for America, and certainly not just for all of humankind. Thus, I am ever grateful for those bringing compassion, good faith, and competence to commerce and government. Thank you! [FL TEXT REMOVED] Sincerely, jeremy fryberger Ketchum, ID 83340

Comment Number: EPA-HQ-OAR-2022_0389-0375-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Wiskowski

Organization:

Excerpt Text:

[FL TEXT REMOVED] Much more needs to be done to protect the public from environmental exposure that has been caused by power and greed. So many people including myself have significant health issues because of toxic waste/air/water with zero support to help deal with these health issues. We MUST do better and 100% listen to indigenous people.

Comment Number: EPA-HQ-OAR-2022_0389-0326-0001

Commenter Type: Private Citizen

Commenter: Jim Woolly

Organization:

Excerpt Text:

DEAR SEC. REGAN. I HAVE PERSONAL EXPERIENCE WITH WHAT LEADED GAS DOES TO OBJECTS IN THE ATMOSPHERE AND HENCE TO YOUR LUNGS I HAVE A 1965 FASTBACK CAR THAT I BOUGHT NEW. THE FASTBACK CREATES A LOW PRESSURE AREA THAT SUCKS THE EXHAUST FUMES UP OVER THE BACK. WHEN I RESTORED THE CAR IN 86 THE CHROME & PAINT WERE EATEN UP. I THEN SWITCHED TO UNLEADED AND THE CORROSION S T O P P E D.. AND THE CHROME IS STILL IN GOOD SHAPE.

Comment Number: EPA-HQ-OAR-2022-0389-0221-0012

Commenter Type: Private Citizen

Commenter: Charlie Schlinger

Organization:

Excerpt Text:

[Bold: Summary of My Interactions with NMC Representatives and Others on This Matter]

This summary is provided to document efforts to bring these historic and ongoing lead particulate emissions and exposures to the light of day, in the interest of protecting public and environmental health and welfare through the cessation of lead particulate emissions and exposures and for parents of potentially impacted children to be notified. Regarding the cessation request, note that there are FAA-approved high-octane unleaded aviation gas alternatives available such as GAMI G100UL (available as of 9/1/22). Further, there are electric trainers for use in the flight schools.

[Underlined: All of the following events occurred during the ongoing Covid-19 pandemic, and many of them were at the height of the long-running pandemic. Thus, community organizing was not advisable.]

On April 14, 2021, NMC Trustee Chris Bott stated in a letter (attached):

“This letter is in response to your email correspondence of April 5, 2021, to the NMC Board of Trustees. As explained in a previous communication, the NMC Board relies on the expertise of the college’s executive team and program directors in matters of compliance with regulations and standards for our academic programs and services. In response to the questions posed regarding aircraft fuel used in our aviation program, our Aviation program leadership reports the following:

- Fuel formulation for aircraft since 1967 has most likely contained lead in amounts set by state and federal regulations and standards.
- The current NMC Aviation fleet uses 100 octane Low Lead (100LL) per current standards, and within the specific performance guidelines for our aircraft engines.”

Several things stand out from the above response. The first thing is that the NMC trustees and management first and foremost follow the regulations when it comes to NMC’s flight school piston-engine aircraft lead particulate emissions in the Traverse City area. Curiously there is no evidence for moral or ethical considerations on the Trustees’ parts; they are making purely business decisions in this regard. The second thing is that the NMC executive team and program directors got thrown under the bus by the Trustees and the Trustees’ legal counsel.

[See original attachment for image]

Commencing at some point in mid-2021, possibly in response to my raising the issue during an April 21, 2021, Michigan PFAS (per- and polyfluoroalkyl substances) Action Response Team (MPART) virtual Town Hall meeting concerning the Cherry Capital Airport / East Bay Township area PFAS contamination found in residential groundwater supply wells, the Michigan Department of Health and Human Services (MDHHS) has, I have been told, been looking into this NMC flight school lead particulate emissions and

exposure matter from a toxicological point of view. MDHHS representatives are for some reason(s) unknown to me no longer able or willing to respond to my inquiries as to study completion progress, so I do not know the status of their investigation or their findings, or if the study is even still ongoing. Governor Gretchen Whitmer's office has not been able to stimulate interest on the part of DHHS representatives in updating the public, and the office has not responded to several public inquiries to find out what is, or is not, ongoing at MDHHS in these regards.

On March 30, 2022, I sent a letter to Rebecca MacPherson, a Regional Administrator with the FAA, raising essentially the same concerns as those expressed in this letter, but with somewhat lesser documentation and less narrative, about lead particulate emissions and lead exposure to Traverse City, Michigan children and residents from the NMC flight school touch-and-go piston-engine aircraft operations. A reply from Rebecca MacPherson was received, copy attached, but it skirted all issues germane to NMC and Traverse City, notification of the public of ongoing lead particulate emissions and exposures, the pernicious aspects of flight school piston-engine aircraft lead particulate emissions associated with touch-and-go training operations or any related issues, all of which had been raised in my letter to her. Instead, she addressed the general issue of piston-engine aircraft lead emissions, deferring to others and to the potential future actions of others.

My March 30, 2022 letter was copied to a long list of individuals and their associated organizations, including the following key parties:

- NMC Trustees Rachel A. Johnson, Laura J. Oblinger, Kenneth E. Warner, Andrew K. Robitshek, Douglas S. Bishop, Chris M. Bott, and Kennard R. Weaver
- NMC President Nick Nissley
- Alex Bloye, NMC Flight School Director
- Kevin Klein, Cherry Capitol Airport Director
- Traverse City Record Eagle editors and writers Nathan Payne, Allison Batdorff, Dan Nielsen, Grace George, Mark Urban, Stephanie Shomin
- Traverse City Mayor & Commissioners Richard Lewis, Amy Shamroe, Mi Stanley, Mitchell Treadwell, Ashlea Walter, Tim Werner, Mark Wilson
- Northwest Education Services Intermediate School District Board members Joseph Fisher, Jim Scherrer, Elizabeth McKellar, Rachael Birgy, Jim Carpenter, Jason Tank, Nicki Brown
- Traverse City Area Public Schools Board Members Scott Newman-Bale, Sue Kelly, V. Flournoy Humphreys, Matt R. Anderson, Andrew R. Raymond, Erica L. Moon Mohr, Josey Ballenger
- The Honorable Pete Buttigieg, Secretary, U.S. Department of Transportation
- FAA Office of Policy, International Affairs, and Environment Michigan Department of Health and Human Servicesd
- Michigan Department of EGLE Director Lisle Clark (since retired)
- USEPA
- Michigan Attorney General Dana Nessel

I also sent a copy directly to EPA Administrator Michael Regan, as well as to other individuals that I thought might have an interest.

While some of these identified individuals (Klein, Bloye) long knew of NMC's practices concerning leaded aviation gas use and the associated lead emissions, all of these individuals and organizations were informed on that date or shortly thereafter (there were some mailings by US Mail) as to what was going on in Traverse City and what had been going on for nearly a half-century, concerning NMC flight school lead particulate emissions and the associated exposures, particularly as relates to fair- weather, low windspeed, low altitude touch-and-go operations that are repeated and have presumably been repeated thousands of times a year for the past half century, likely over the same Traverse City neighborhoods and areas. There was little to no response, expression of care or concern, or even acknowledgment of receipt from nearly all who were copied.

On May 3, 2022, I presented a similar unsolicited message to the Northwest Education Services (NES) Board meeting, as the matter concerned / concerns not one but two of the facilities that the NES either uses or operates, and those would be Oak Park School and the Traverse Bay Area Career Tech Center. NES representatives thanked me for my presentation and have otherwise been silent on the matter since March 20, 2022, at least as concerns any communication with me.

During June of 2022, I reached out to then Grand Traverse County Commissioner Betsy Coffia regarding my concerns about NMC's lead emissions and exposures from them. Betsy punted my detailed questioning regarding the matter over to Grand Traverse County Commissioner Rob Hentschel, who also serves On the Airport Authority Board of Directors, stating:

“I think you ask some very fair questions as a neighbor impacted by the airport's operations. I am including Chairman Hentschel in this e-mail reply so he can see your questions and concerns below - this is because while Charlie is a constituent in my district, Mr. Hentschel is our BOC representative on the airport which recently moved from a commission to a more self contained authority.”

County Commissioner Hentschel offered to pass specific questions to airport and county staff. County Commissioner Coffia, now a Michigan 103rd District Representative, never offered an opinion or concern about the matter of NMC lead exposures to children in the district that she, at the time, represented. Both Commissioners morphed urgent concerns from a member of the public into a simple matter of questions that they or their subordinates or colleagues needed to answer. Neither seemed to comprehend the gravity of the concerns – or at least they created that impression.

On July 11, 2022 the Traverse City Human Rights Commission kindly allowed me to present on this matter and expressed interest and encouragement but I did not hear further from the Human Rights Commission as an entity, though I did have a limited email exchange with several of its representatives. I gather that this was a matter in which they have little say – given their marching orders.

On July 18, 2022, I had my 3 minutes in the sun with the Traverse City Commissioners at their regularly scheduled meeting. I attended and presented at their public because I hadn't heard from a single one of them in response to my March 30, 2022, letter to Rebecca MacPherson, on which they were copied. My presentation, which concerned the public health and safety of Traverse City children and the community, was cut off at 3 minutes – the usual and customary time allotted to mere members of the public by the Traverse City Commissioners as part of how they throttle public input. I gave the presentation under duress, as it was late, I had witnessed that the Commissioners were particularly hostile to public input that evening and I recollect that they were especially anxious to go into closed session on other matters. I submitted written materials, including a copy of my March 20, 2022, letter, the approximate touch-and-go circuit map (see above) showing preferred NMC touch-and-go routes, and a copy of the March 16, 2022, Attorneys General letter to EPA Administrator Regan (Docket ID No. EPA-HQ-OLEM-2021-0762: Multistate Comments Concerning EPA's Draft Strategy to Reduce Lead Exposures and Disparities in U.S. Communities (November 16, 2021)).

Once I was cut off from speaking further at the Traverse City Commissioners meeting, Mayor Richard Lewis, apparently irritated that I had written in March and then, 3 months later, was brazen enough to come before their august group with my concerns about the health of children and citizens in the community, yelled at me as I was leaving – to the effect that this matter needed to be taken before Northwestern Michigan College. That of course had already been done and that had been made abundantly clear in my March 30, 2022, letter, on which he and the other Commissioners were copied. To my knowledge, all individuals who were Traverse City Commissioners at the time had been and have remained silent on the matter.

By the summer of 2022, NMC's preferred touch-and-go flight path had shifted at times to directly over the general area of the small neighborhood where I lived, which had not been the case in 2019, 2020 or 2021. This form of retribution by noise and lead particulate exposure is all too common across the U.S. If

the EPA or FAA requests specifics, I would be happy to furnish them. There are consequences to publicly challenging the privileged general aviation culture, with the majority of piston-engine- aircraft planes used solely for recreational purposes, and with the majority of such piston-engine-aircraft spraying lead particulates everywhere they are operated, and everywhere they have ever been operated.

Comment Number: EPA-HQ-OAR-2022-0389-0182-0003

Commenter Type: Private Citizen

Commenter: David Nguyen

Organization:

Excerpt Text:

Point B:

Emissions associated with different types of aircrafts make an impact on our climate. Not only that, it also affects our air quality which can be detrimental to the health of those who live close to the airports, and especially those who already suffer from respiratory illnesses. It also has an effect on the people that work close to or at the airports. In their daily work, they are exposed to aircraft engine emission which can have a long life effect on their health in the future. A type of engine emission that these people can get exposed to comes from jets.

According to a review article entitled A review of health effects associated with exposure to jet engine emissions in and around airports (2021), jet engine emissions contain large amounts of nano-sized particles that are known to reach the lower airways upon inhalation. Jet engine emission is similar to diesel exhaust emissions that is classified as carcinogenic which can cause cancers. The study concludes that biomarkers of effect among airport personnel are reported. Also, residential areas have been associated with increased risks of diseases, increased exposures, increased hospital admissions and self-reported lung symptoms. Increased risk of cancer was also reported.

Also a recent study done by Rima Habre, details the short-term health impacts caused by inhaling ultrafine particulates, also known as UFP, that are emitted from aircrafts at the Los Angeles International Airport (2022). According to Habre, UFP matter contributes to reduced lung function, and airway inflammation in people with asthma. It shows how these pollutants have a negative impact on the individual's health. He also mentioned that children with asthma have a high risk of experiencing asthma attacks shortly after exposure. He had also seen inflammation in blood circulation, that is tied to lots of diseases such as cardiovascular, respiratory and metabolic. UFPs make a large impact on residents and communities close to the airports.

As mentioned, a growing concern should be addressed which are significant among high-emission sources that many can get exposed to. Your regulation will protect not only the residents that reside in close proximity to the airports but we should also think about the airport personnels that work closely at these particulates and emissions daily and it will protect those who suffer from respiratory related illnesses. Additionally, we can help make changes that will be beneficial to many individuals.

Comment Number: EPA-HQ-OAR-2022_0389-0293-0001

Commenter Type: Private Citizen

Commenter: Betty Thompson

Organization:

Excerpt Text:

As a United States citizen I am advocating for a better and cleaner America for everyone here and in the world. We must do a better job of cleaning up the air. The clock is ticking. Living in western North

Carolina, I know how beautiful our mountains are. But the trees and the land and the air is changing because of polluted skies. Do you know how many school buses and diesel semi-trucks travel our curvy narrow rural mountain roads in my part of the state? Imagine big cities like Charlotte, Raleigh and Durham, North Carolina.[FL TEXT REMOVED] Sincerely, Betty Thompson Asheville, NC 28803

Comment Number: EPA-HQ-OAR-2022_0389-0407-0004

Commenter Type: Private Citizen

Commenter: David Pedersen

Organization:

Excerpt Text:

And perhaps most shockingly of all, leaded fuel remains legal not only for aviation, which is the focus of this proposed rule, but motorsports as well - with significant health and welfare impacts (see e.g. <https://thehill.com/changing-america/sustainability/3716345-how-nascars-switch-to-unleaded-gas-boosted-test-scores-near-racetracks/>). Even some motorsports organizations, such as NASCAR, have abandoned the use of leaded fuel because of clear evidence of how harmful it is, despite not being forced to by any statute or regulation.

Comment Number: EPA-HQ-OAR-2022-0389-0152-0001

Commenter Type: Private Citizen

Commenter: Jasmine Jimenez

Organization:

Excerpt Text:

Please note on my previous comments, the word misspelled should be LEAD, please accept my apologies.

Comment Number: EPA-HQ-OAR-2022_0389-0359-0001

Commenter Type: Private Citizen

Commenter: Andre Nagel

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Sure yeah do it or whatever idc

Comment Number: EPA-HQ-OAR-2022_0389-0362-0001

Commenter Type: Private Citizen

Commenter: Virginia Lee

Organization:

Excerpt Text:

I am writing as a biologist (1977 BS Biology, magna cum laude, Phi Beta Kappa), lawyer (1979 JD), a Utah Republican precinct chair, and a member of the Union of Concerned Scientists. Earth is already in the midst of its sixth mass extinction episode, which is driven by 1) over-population and continued population growth, and 2) over-consumption by the rich.

Comment Number: EPA-HQ-OAR-2022_0389-0362-0002

Commenter Type: Private Citizen

Commenter: Virginia Lee

Organization:

Excerpt Text:

Included within those two drivers are the proximate causes of Earth's sixth mass extinction: Climate disruption, habitat conversion, over-exploitation, toxification, species invasions, disease, and (potentially) large-scale nuclear war.

Comment Number: EPA-HQ-OAR-2022_0389-0453-0001

Commenter Type: Private Citizen

Commenter: Janice Gintzler

Organization:

Excerpt Text:

Carbon is over 420 parts per million in our atmosphere even though 350ppm is the max that Earth can tolerate. And who dies through severe weather? Mostly it is people with barely any assets at all. Look at Pakistan, where last week a third of the country was under water. It is not as if Pakistanis are wealthy or put much carbon into the atmosphere.

Comment Number: EPA-HQ-OAR-2022_0389-0466-0001

Commenter Type: Private Citizen

Commenter: Charles and Nancy Bagley

Organization:

Excerpt Text:

Legal Notice Depriving an individual the opportunity to join the Army and instead stealing his identity for covert operations and investment gains is a crime against humanity. Then to continue the practices in confidence without including the victim is a whole different crime In itself. "Unconstitutional " without question. "Unjust enrichment " The EPA is just as guilty as the USDOT for fabrication of false maps and documentation, leading up to unethical practices and procedures that are taking place in Madras Oregon. Placing protective orders on all details involving a victim of Dishonor , abuse and other major crimes against humanity Such as The Atomic Energy act of 1954 and the HEA of 1965, is an absolute injustice. "Fraudulent Discrimination " The pure disregard for a humans rights is the most unethical form of evil on this planet, The only remedy to correct the unjust practices of deceit, abuse and crime against humanity is to award Damages to the Victims of these horrific acts. Action has been taken in an attempt to correct the unlawful practices taking place causing extreme Psychological Distress to the Victim. "A single Father" All parties aware of the details shall testify under oath about their involvement and admit they acted with prejudice and disregard for the Human Rights of the people, and the Constitution of the United States. Claiming "Emergency" for everything to pass unconstitutional laws shall not be legal. It's unethical and shall be recognized as so. In good faith Aaron Ahern

Comment Number: EPA-HQ-OAR-2022_0389-0474-0001

Commenter Type: Private Citizen

Commenter: Aaron Ahern

Organization:

Excerpt Text:

Legal Notice Depriving an individual the opportunity to join the Army and instead stealing his identity for covert operations and investment gains is a crime against humanity. Then to continue the practices in confidence without including the victim is a whole different crime In itself. "Unconstitutional " without question. "Unjust enrichment " The EPA is just as guilty as the USDOT for fabrication of false maps and documentation, leading up to unethical practices and procedures that are taking place in Madras Oregon. Placing protective orders on all details involving a victim of Dishonor , abuse and other major crimes against humanity Such as The Atomic Energy act of 1954 and the HEA of 1965, is an absolute injustice. "Fraudulent Discrimination " The pure disregard for a humans rights is the most unethical form of evil on this planet, The only remedy to correct the unjust practices of deceit, abuse and crime against humanity is to award Damages to the Victims of these horrific acts. Action has been taken in an attempt to correct the unlawful practices taking place causing extreme Psychological Distress to the Victim. "A single Father" All parties aware of the details shall testify under oath about their involvement and admit they acted with prejudice and disregard for the Human Rights of the people, and the Constitution of the United States. Claiming "Emergency" for everything to pass unconstitutional laws shall not be legal. It's unethical and shall be recognized as so. In good faith Aaron Ahern

Comment Number: EPA-HQ-OAR-2022_0389-0491-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Every day invasive species, weather extremes, deer prey, pest and disease outbreaks, and infections harm trees and forests. The forests and trees are under threat. Unfortunately due to the decline approaching extinction and environmental disaster.

Comment Number: EPA-HQ-OAR-2022_0389-0690-0001

Commenter Type: Private Citizen

Commenter: Rocky Harrell

Organization:

Excerpt Text:

I want to thank the time out my busy schedule and let everyone know for the time I got my f250 does truck back one time and it smelled like jet fuel as I was in the neibhirhood the other month and noticed you finally taken her completely apart and didn't offer me to have it back so I was wanting to say thank you for all that you could ever do to make sure I won't ever be noine in life cause I can't go nowhere and hope you realize I am struggling more than you know and worried more than you could think so maybe I can keep what good me worked I have inside my heart to remember cause don't look like I will be able to get around to go make more do to the law needing some good lines drawn for the dead and alive hope I live out a good life but doubt I get to finish his one I hope no one has. Ok e thinking bad of them and they didn't do what others think I did do cause it's hard to get help from ones that think bad of me for trading my cars for I never did they just disappear but owell won't ever be non e for sure now sorry for the ones who I got mad and all

Comment Number: EPA-HQ-OAR-2022-0389-0175-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

"The Hanscom Field Advisory Commission is requesting a formal commitment from the Massachusetts Port Authority to address issues of potential lead contamination..."

https://www.thebedfordcitizen.org/2022/11/panel-seeks-formal-reports-on-lead-energy-at-hanscom-field/?utm_source=rss&utm_medium=rss&utm_campaign=panel-seeks-formal-reports-on-lead-energy-at-hanscom-field&fbclid=IwAR37bWExgQPgQOMN0zJhs7vZOrvbwSBUjz--MujsPMe4guUUwGSzwd68ey4

Comment Number: EPA-HQ-OAR-2022-0389-0231-0005

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

Also, beyond a lead endangerment finding for aviation fuel, the EPA must stop allowing lead in makeup and personal care products, like the EU!

Lead in plastics is NOT regulated [Footnote 14:

<https://www.cdc.gov/nceh/features/leadintoy/index.html>] and lead dust is released when plastics are exposed to sunlight, air, and detergent. Lead in items like teething rings, pacifiers, sippy cups, dishes, utensils, children's toys, jewelry, clothing, baby food [Footnote 15:

https://www.healthybabyfood.org/sites/healthybabyfoods.org/files/2022-08/StoreVsHomemade_2022.pdf] or any products used or borrowed by children must be stopped. Lead

and other heavy metals are also found in synthetic turf [Footnote 16:

<https://static1.squarespace.com/static/589fbbcbd482e9cad937c944/t/5e1bd2db36130777a095a402/1578881756966/CDC+2008+-+Lead+Advisory+in+Turf.pdf>] and crumb rubber infill. [Footnote 17:

<https://www.ecocenter.org/new-test-results-show-elevated-lead-rubber-shred-playground-washington-dc>]

Lead must not be allowed in any items as children are often given party favors and other items meant for adults. For example, over 60% of Mardi Gras beads [Footnote 18:

https://www.ecocenter.org/sites/default/files/BeadReport2013_lowres.pdf] were found to contain over 100 ppm of lead and other toxins. 25 million pounds [Footnote 19:

<https://www.smithsonianmag.com/science-nature/toxic-truth-mardi-gras-beads-180962431/>] of these beads are left on the streets of New Orleans every year with these toxins getting into our waterways and soil.

CleanEarth4Kids.org calls on the EPA and other federal/state agencies to educate the public on the harms and sources of lead while greatly improving lead screening policies including universal childhood screening along with reporting requirements to identify and stop sources of lead. The public has a right to know!

Comment Number: EPA-HQ-OAR-2022_0389-0292-0001

Commenter Type: Private Citizen

Commenter: James Klein

Organization:

Excerpt Text:

[FL TEXT REMOVED] This, like numerous other issues (climate change, gun safety, immigration

reform, prison reform, education reform, short-term lending regulation, healthcare reform, banking regulation, opioid regulation) remains a vexing problem primarily due to corporations' ability to curry favor with elected officials. The corrupting influence of money in our political system is undermining our democratic traditions and discouraging Americans from voting and/or running for office. This ominous development may well end our experiment in representative democracy unless we alter this decades-long trend. For the sake of the republic, we must amend the US Constitution to state that corporations are not people (and do not have constitutional rights) and money is not speech (and thus can be regulated by state and/or federal campaign finance laws). Short of accomplishing this, no other reform of significance will be achieved. The moneyed interests will turn any reform to their benefit, often at the expense of the nation as a whole. Sincerely, James Klein Corpus Christi, TX 78411

Comment Number: EPA-HQ-OAR-2022-0389-0499-0001

Commenter Type: Private Citizen

Commenter: Stephane Ernoux

Excerpt Text:

Here is where we are, not stated by a radical environmentalist, but from the Head of the United Nations: "Humanity is waging war on nature. This is suicidal. Nature always strikes back -- and it is already doing so with growing force and fury. [...] Let's be clear: human activities are at the root of our descent towards chaos. But that means human action can help solve it. Making peace with nature is the defining task of the 21st century. It must be the top, top priority for everyone, everywhere. [...] But there is no vaccine for the planet. Nature needs a bailout. [...] This is an epic policy test. But ultimately this is a moral test. It is time to flick the "green switch". We have a chance to not simply reset the world economy but to transform it.

Comment Number: EPA-HQ-OAR-2022-0389-0470-0001

Commenter Type: Private Citizen

Commenter: Galen Knight

Organization:

Excerpt Text:

Aviation and non-scientists have no idea how much harm they are causing our health, our ecosystems, and even our climate and weather! Lead is just the tip of a rapidly melting icebergs on earth

<http://vitaletherapeutics.org/vtrefab.htm>

<http://vitaletherapeutics.org/townlett.pdf>

<http://web.archive.org/web/20040609231824/http://www.abqtrib.com/cancer/index.shtml>

<https://cancerres.aacrjournals.org/content/canres/54/21/5623.full.pdf>

<https://cancerres.aacrjournals.org/content/canres/54/21/5636.full.pdf>

<http://vitalethine.org/WAPFMetlTox.html>

<https://worldbeyondwar.org/wp-content/uploads/2019/07/impact.pdf>

<https://theconversation.com/us-military-is-a-bigger-polluter-than-as-many-as-140-countries-shrinking-this-war-machine-is-a-must-119269>

<https://articles.mercola.com/sites/articles/archive/2019/07/17/military-is-among-the-worst-polluters.aspx>

<https://www.rollingstone.com/politics/politics-features/oil-gas-fracking-radioactive-investigation-937389/>

<https://oehha.ca.gov/media/downloads/proposition-65/p65list010320.pdf>

(See "Shale-oils cancer" April 1, 1990 & "Soots, tars, and mineral oils untreated and mildly treated oils and used engine oils cancer" February 27, 1987)

<http://vitaletherapeutics.org/BLMProtest+.pdf>

<http://vitaletherapeutics.org/Health/Fracking.pdf>
<http://vitaletherapeutics.org/Health/Fracking.html>
<http://vitaletherapeutics.org/FrackingFluids/Chemicals.pdf>
<http://vitaletherapeutics.org/FrackingFluids/Chemicals.html>
<http://vitaletherapeutics.org/EPA/CommentsEPAHFShale2.pdf>
<http://vitaletherapeutics.org/Notice/NotePuPoFlare.pdf>
<http://vitaletherapeutics.org/GMO&Fracking/SuperDelegatePlea.pdf>

Comment Number: EPA-HQ-OAR-2022_0389-0625-0001

Commenter Type: Private Citizen

Commenter: Harold Shapiro

Organization:

Excerpt Text:

I live 5 miles from an airport that is supposed to be for general aviation purposes only. Everyday there are 100's of flights taking off and landing all day and night (despite a voluntary curfew supposed to be in place). This airport has illegally grown to be one of the largest GA airports in the world. There is no oversight of this facility by the government to protect the millions of residents who live in the surrounding valley and hills. There is no transparency being provided by airport management to the surrounding communities on airport growth activities. The airport masterplan has not been updated in over 17 years. This airport has been receiving millions of dollars in US Government Grants via the Federal Aviation Agency. This airport benefits only a small minority of wealthy individuals. It is hurting hundreds of thousands of residents and business owners in the surrounding communities with the noise and air pollution the planes are emitting all day long. This is a sad case of money grubbing corporations overpowering the common people. And even sadder, is that the US Government funds their operations and the money comes from these very same common people in the form of taxes paid on their hard earned salaries. How can you let this happen? There are schools being inundated by the pollution spewed from these planes. All the studies performed clearly indicate that these fumes are deadly. $1 + 1 = 2$ - can't you see the obvious? Why is this type of deadly behavior (allowing pollution and suffocating innocent people who are directly impacted as they live nearby) even occurring? Stop it now, please!

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-003-0002

Commenter Type: Private Citizen

Commenter: Migdalia Rodriguez-Cubides

Organization:

Excerpt Text:

A second negative impact on the quality of life of all the persons that live and work there is the constant noise created by small airplanes providing services late at night, resulting in potential hearing problems and impacting on the ability to lead a peaceful life. However, we are resilient. We look for healthy habits to prevent poisoning from lead that falls off the sky, becoming a mild solution against a gigantic air pollution that leads to adverse effects for the health, the environment, and all that live and work there in east San Jose. All of us that live under the same sky are impacted because it goes beyond San Jose and it encompasses all of the United States where there are piston engine airplanes that need leaded gasoline. It is a daily challenge and that is why we thank you for these spaces to come to you, the highest authority in the development and implementation of environmental policies, to give us prudent solutions since it is an international right to have a link between the environment and the human beings. It is a civil right, and we ask you to guarantee us the right to have a decent life because it is not possible that your economic

activities are above us and impair our lives. This affects not only human beings, but all living fauna including the flora. We thank you that you bear in mind this message to be able to continue to lead a decent life.

Response to Other Comments

Additional comments on the proposed action covered a wide range of topics. Comments in this section are related to topics that are beyond the scope of this action, as noted below, and thus require no response.

We did not propose or request comment on the following topics raised by commenters, nor does the final action address these issues: lead in consumer products (e.g., makeup and toys), lead in motorsport fuel, lead exhaust from a vintage car, other types of pollution from sources other than covered aircraft (such as jet aircraft, which do not use leaded fuel and are not addressed by this action), and environmental concerns unrelated to lead pollution or emissions of lead from covered aircraft. Accordingly, these topics are beyond the scope of this action.

Other comments in this section are also not germane to this action, and thus beyond the scope of this action, including: opinions regarding “the corrupting influence of money in our political system”; concerns about political interference and corruption; statements about overpopulation and overconsumption, and their related impacts; statements submitted about climate change and the transition to green energy; other statements submitted without relevance to the proposed or final action; and personal communications with local airports.

In this section of the RTC, the EPA is focusing on other comments that are beyond the scope of this action. We direct the reader to the table of contents of this RTC document for the location of responses to comments on specific topics.

Appendix A. Acronyms

AAAE	American Association of Airport Executives
AAE	Office of Audit and Evaluation
AAM	Advanced Air Mobility
AAP	American Academy of Pediatrics
ACAT	Alaska Community Action on Toxics
ACIP	Airports Capital Improvement Plan
ACO	Wichita Aircraft Certification Office
ACRP	Airport Cooperative Research Program
ACS	American Chemical Society
AD	Airman's Directive
ADHD	Attention Deficit Hyperactivity Disorder
AERMOD	American Meteorological Society and U.S. Environmental Protection Agency Regulatory Model
AFPM	American Fuel & Petrochemical Manufacturers
AJPH	American Journal of Public Health
AML-STC	Approved Model List-Supplemental Type Certificate
ANPR	Advance Notice of Proposed Rulemaking
AOPA	Aircraft Owners and Pilots Association
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
ATC	Air Traffic Control
AVGAS	Aviation Gasoline
BIPOC	Black, Indigenous, and People of Color
BLL	Blood Lead Level
BLRV	Blood Lead Reference Value
BMJ	British Medical Journal
BVY	Beverly Regional Airport
CAA	Clean Air Act
CARB	California Air Resource Board
CASAC	Clean Air Scientific Advisory Committee
CBD	Center for Biological Diversity
CDC	Centers for Disease Control and Prevention
CDPH	State of California, Department of Public Health
CEH	Center for Environmental Health
CFR	Code of Federal Regulations
CODALE	Cone of Distinguishable Aviation Lead Emissions
CSA	Coalition for Sustainable Aviation
DHHS	Department of Health and Human Services
DOT	U.S. Department of Transportation
EAA	Experimental Aircraft Association
EAGLE	Eliminate Aviation Gasoline Lead Emissions Initiative
EDB	Ethylene Dibromide
EJ	Environmental Justice
EJMAP	Environmental Justice Mapping, Assessment and Protection Tool
EPA	U.S. Environmental Protection Agency

E-AB	Experimental Amateur Built
FAA	Federal Aviation Administration
FBO	Fixed Base Operator
FCTC	Framework Convention on Tobacco Control
FoE	Friends of the Earth
FR	Federal Register
FRTR	Federal Remediation Technologies Roundtable
FY	Fiscal Year
GA	General Aviation
GAAC	General Aviation AvGas Coalition
GAMA	General Aviation Manufacturers Association
GAMI	General Aviation Modifications, Inc.
GAO	U.S. Government Accountability Office
GATC	Global Alliance for Tobacco Control
GHG	Greenhouse Gas
HC	Hydrocarbon
HHS	U.S. Department of Health & Human Services
HIO	Hillsboro Airport
HOPA	Homeowner and Parents Associations
ICAO	International Civil Aviation Organization
ISA	Integrated Science Assessment
NMC	Northwestern Michigan College
LL	Low Lead
LSA	Light-Sport Aircraft
LSD	Low Sulfur Diesel
LUNA	Latinos United for a New America
MAC	Metropolitan Airports Commission
MDHHS	Michigan Department of Health and Human Services
MDOT	Michigan Department of Transportation
NAAA	National Agricultural Aviation Association
NAAQS	National Ambient Air Quality Standards
NAI	Negative Aviation Impacts
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NASCAR	National Association for Stock Car Auto Racing
NATA	National Air Transportation Association
NBAA	National Business Aviation Association
NCBI	National Center for Biotechnology Information
NCHH	National Center for Healthy Housing
NCHR	National Center for Health Research
NEI	National Emissions Inventory
NES	Northwest Education Services
NESCAUM	Northeast States for Coordinated Air Use Management
NGO	Non-Governmental Organization
NHANES	National Health and Nutrition Examination Survey
NIH	National Institute of Health
NJPEEC	New Jersey Progressive Equitable Energy Coalition
NLM	National Library of Medicine
NMC	Northwestern Michigan College

NPIAS	National Plan of Integrated Airport Systems
NRDC	Natural Resources Defense Council
NTTAA	National Technology Transfer and Advancement Act
OAR	Office of Air and Radiation
OAW	Oregon Aviation Watch
OBC	Overburdened Communities
OEM	Original Equipment Manufacturer
OIG	Office of Inspector General
PAFI	Piston Aviation Fuels Initiative
Pb	Lead
PEA	Piston Engine Aircraft
PEH	Piston Engine Helicopters
PFAS	Per- and Polyfluorinated Substances
PM	Particulate Matter
PNAS	Proceedings of the National Academy of Sciences
PRA	Paperwork Reduction Act
PUCC	Proprietary Unleaded Chemical Compositions
RFA	Regulatory Flexibility Act
RFG	Reformulated Gasoline
RFP	Request for Proposal
RHV	Reid-Hillview Airport
RMMA	Rocky Mountain Municipal Airport
SAF	Sustainable Aviation Fuel
SCC	Santa Clara County
SeaTac	Seattle-Tacoma International Airport
SRV	Socially Redeeming Values
STC	Supplemental Type Certificate
TEL	Tetraethyl Lead
TENDR	Targeting Environmental Neuro-Developmental Risks
TSD	Technical Support Document
TVASNAC	Town Village Aircraft Safety Noise Abatement Committee
UFP	Ultrafine Particles
UL	Unleaded
ULL	Ultra Low Lead
UMRA	Unfunded Mandates Reform Act
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WHO	World Health Organization

Appendix B: Table of Commenters on this Action

Comment Number	Commenter
EPA-HQ-OAR-2022-0389-0129	Jean Public
EPA-HQ-OAR-2022-0389-0130	Jasmine Jimenez
EPA-HQ-OAR-2022-0389-0131	Airport Impact Relief, Inc.
EPA-HQ-OAR-2022-0389-0132	Kathryn Rifkin
EPA-HQ-OAR-2022-0389-0133	Jasmine Jimenez
EPA-HQ-OAR-2022-0389-0134	Anonymous
EPA-HQ-OAR-2022-0389-0135	Lee Ann Shandle
EPA-HQ-OAR-2022-0389-0136	Celia Taghdiri
EPA-HQ-OAR-2022-0389-0137	Anonymous
EPA-HQ-OAR-2022-0389-0138	Katherine Ambrose
EPA-HQ-OAR-2022-0389-0139	Jacob Kasza
EPA-HQ-OAR-2022-0389-0140	Bernita Fruhling
EPA-HQ-OAR-2022-0389-0141	Alan Levenson
EPA-HQ-OAR-2022-0389-0142	Christopher Eliot
EPA-HQ-OAR-2022-0389-0143	Sandy Zelasko
EPA-HQ-OAR-2022-0389-0144	Oregon Aviation Watch
EPA-HQ-OAR-2022-0389-0145	General Aviation Manufacturers Association, et al., Jim Coon
EPA-HQ-OAR-2022-0389-0147	Elsa Keefe
EPA-HQ-OAR-2022-0389-0148	Tom Materna
EPA-HQ-OAR-2022-0389-0149	A. McCoy
EPA-HQ-OAR-2022-0389-0150	Jessica Darke
EPA-HQ-OAR-2022-0389-0151	Jasmine Jimenez
EPA-HQ-OAR-2022-0389-0152	Jasmine Jimenez
EPA-HQ-OAR-2022-0389-0153	Kimberly Turner
EPA-HQ-OAR-2022-0389-0154	Sarah Rosenthal
EPA-HQ-OAR-2022-0389-0155	Rachel Stanton
EPA-HQ-OAR-2022-0389-0156	Carmen Sucharov
EPA-HQ-OAR-2022-0389-0157	Richard Breyer
EPA-HQ-OAR-2022-0389-0158	Jameson Walker
EPA-HQ-OAR-2022-0389-0159	B. J. Wilson
EPA-HQ-OAR-2022-0389-0160	Olivia Zmarzly
EPA-HQ-OAR-2022-0389-0161	Maggie Glenn
EPA-HQ-OAR-2022-0389-0162	Jean Public
EPA-HQ-OAR-2022-0389-0163	National Air Transportation Association (NATA)
EPA-HQ-OAR-2022-0389-0164	Airport Impact Relief, Inc.
EPA-HQ-OAR-2022-0389-0165	STOP Jet Noise NOW! SFOAK North S.F. Bay Area
EPA-HQ-OAR-2022-0389-0166	Marilu Zepeda
EPA-HQ-OAR-2022-0389-0167	Karl Olson

EPA-HQ-OAR-2022-0389-0168	María Reyes
EPA-HQ-OAR-2022-0389-0169	Ed Maher
EPA-HQ-OAR-2022-0389-0170	Gloria Lechuga
EPA-HQ-OAR-2022-0389-0171	Rita Birrueta
EPA-HQ-OAR-2022-0389-0172	Alfonso Mendez
EPA-HQ-OAR-2022-0389-0173	Robert Bartholomew
EPA-HQ-OAR-2022-0389-0174	Glen Anderson
EPA-HQ-OAR-2022-0389-0175	Anonymous
EPA-HQ-OAR-2022-0389-0176	Katherine Miller
EPA-HQ-OAR-2022-0389-0177	Sandra Ramirez
EPA-HQ-OAR-2022-0389-0178	Town of Middleton-Wisconsin
EPA-HQ-OAR-2022-0389-0179	Town of Middleton, Wisconsin
EPA-HQ-OAR-2022-0389-0180	Pritha Multani
EPA-HQ-OAR-2022-0389-0181	Kerry McCarthy
EPA-HQ-OAR-2022-0389-0182	David Nguyen
EPA-HQ-OAR-2022-0389-0183	Sheetal Patel
EPA-HQ-OAR-2022-0389-0184	Piper Noll
EPA-HQ-OAR-2022-0389-0185	Alex de Rege
EPA-HQ-OAR-2022-0389-0186	Rick Reibstein
EPA-HQ-OAR-2022-0389-0187	Diana Smith
EPA-HQ-OAR-2022-0389-0188	Blaine Ackley
EPA-HQ-OAR-2022-0389-0189	VAI Lea
EPA-HQ-OAR-2022-0389-0190	Mary Vierling
EPA-HQ-OAR-2022-0389-0191	John Renehan
EPA-HQ-OAR-2022-0389-0192	Betsy True
EPA-HQ-OAR-2022-0389-0193	Janell Cannon
EPA-HQ-OAR-2022-0389-0194	Matthew Grisius
EPA-HQ-OAR-2022-0389-0196	Barry Hensley
EPA-HQ-OAR-2022-0389-0197	QuietFlorida.org
EPA-HQ-OAR-2022-0389-0198	How The West Was Saved
EPA-HQ-OAR-2022-0389-0199	Howard Mielke
EPA-HQ-OAR-2022-0389-0201	California Air Resources Board (CARB)
EPA-HQ-OAR-2022-0389-0202	Cecilia Wirth
EPA-HQ-OAR-2022-0389-0203	Swift Fuels, LLC
EPA-HQ-OAR-2022-0389-0204	City of Westminster (CO) City Council (Westminster City Council)
EPA-HQ-OAR-2022-0389-0205	Gavin Grant
EPA-HQ-OAR-2022-0389-0206	Coalition for Sustainable Aviation (CSA)
EPA-HQ-OAR-2022-0389-0207	Wisconsin Ecolatinos
EPA-HQ-OAR-2022-0389-0208	Massachusetts House of Representatives, First Suffolk District, Adrian Madaro
EPA-HQ-OAR-2022-0389-0209	American Academy of Pediatrics (AAP)
EPA-HQ-OAR-2022-0389-0210	City of Middleton, Wisconsin

EPA-HQ-OAR-2022-0389-0211	Clean Wisconsin et al.
EPA-HQ-OAR-2022-0389-0212	Ken Engelman
EPA-HQ-OAR-2022-0389-0213	Northeast States for Coordinated Air Use Management (NESCAUM)
EPA-HQ-OAR-2022-0389-0214	State of California, Department of Public Health (CDPH)
EPA-HQ-OAR-2022-0389-0215	Oregon Aviation Watch
EPA-HQ-OAR-2022-0389-0216	Fond du Lac Band of Lake Superior Chippewa
EPA-HQ-OAR-2022-0389-0217	James Lubischer
EPA-HQ-OAR-2022-0389-0218	Corinne Greenman
EPA-HQ-OAR-2022-0389-0219	Citizens Against Gillespie Expansion and Low Flying Aircraft
EPA-HQ-OAR-2022-0389-0220	Citizen's Against Gillespie's Expansion Low Flying Aircraft
EPA-HQ-OAR-2022-0389-0221	Charlie Schlinger
EPA-HQ-OAR-2022-0389-0222	Dorinne Tye
EPA-HQ-OAR-2022-0389-0223	Natural Resources Defense Council (NRDC)
EPA-HQ-OAR-2022-0389-0224	New Jersey Progressive Equitable Energy Coalition (NJPEEC)
EPA-HQ-OAR-2022-0389-0225	Tracy and Anthony Williams
EPA-HQ-OAR-2022-0389-0226	General Aviation Modifications, Inc.
EPA-HQ-OAR-2022-0389-0227	General Aviation Manufacturers Association (GAMA)
EPA-HQ-OAR-2022-0389-0228	National Center for Healthy Housing (NCHH)
EPA-HQ-OAR-2022-0389-0229	7 Directions of Service, The Alaska Center, et al.
EPA-HQ-OAR-2022-0389-0230	Close Reid-Hillview Airport Now! Coalition
EPA-HQ-OAR-2022-0389-0231	CleanEarth4Kids.org
EPA-HQ-OAR-2022-0389-0232	Mass Comment Campaign sponsored by Friends of the Earth. (web)
EPA-HQ-OAR-2022-0389-0233	Mass Comment Campaign sponsored by Project TENDR (Targeting Environmental Neuro-Development Risks). (web)
EPA-HQ-OAR-2022-0389-0234	National Association of Clean Air Agencies (NACAA)
EPA-HQ-OAR-2022-0389-0235	Sierra Club
EPA-HQ-OAR-2022-0389-0236	Anonymous
EPA-HQ-OAR-2022-0389-0237	Industry Partners of the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative
EPA-HQ-OAR-2022-0389-0238	County of Santa Clara, et al.
EPA-HQ-OAR-2022-0389-0239	Alan Hoover
EPA-HQ-OAR-2022-0389-0240	Latinos United for a New America (LUNA)
EPA-HQ-OAR-2022-0389-0241	County of Los Angeles, CA, Board of Supervisors
EPA-HQ-OAR-2022-0389-0242	National Center for Health Research (NCHR)
EPA-HQ-OAR-2022-0389-0243	Law Foundation of Silicon Valley
EPA-HQ-OAR-2022-0389-0244	Alaska Department of Environmental Conservation
EPA-HQ-OAR-2022-0389-0245	Office of the California Attorney General et al.

EPA-HQ-OAR-2022-0389-0246	Lindsay N. Sabadosa, State Representative, 1st Hampshire, Commonwealth of Massachusetts, Lindsay Sabadosa
EPA-HQ-OAR-2022-0389-0247	Winthrop Board of Health
EPA-HQ-OAR-2022-0389-0248	Andrew Andraka
EPA-HQ-OAR-2022-0389-0249	Commonwealth of Massachusetts House of Representative, Adrian Madaro
EPA-HQ-OAR-2022-0389-0250	Anita Wampole
EPA-HQ-OAR-2022-0389-0251	Maria Reyes
EPA-HQ-OAR-2022-0389-0252	Mark Zuberek
EPA-HQ-OAR-2022-0389-0253	Patricia FitzGerald
EPA-HQ-OAR-2022-0389-0254	Robert James
EPA-HQ-OAR-2022-0389-0255	Kim Gustafson
EPA-HQ-OAR-2022-0389-0256	Kathryn Sharpe
EPA-HQ-OAR-2022-0389-0257	City of Middleton, Wisconsin
EPA-HQ-OAR-2022-0389-0258	Commonwealth of Massachusetts, Senate, Joan Lovely
EPA-HQ-OAR-2022-0389-0259	Viney and Nelson
EPA-HQ-OAR-2022-0389-0260	Robert Barrows
EPA-HQ-OAR-2022-0389-0261	Sheryl Gold
EPA-HQ-OAR-2022-0389-0262	New Jersey Progressive Equitable Energy Coalition (NJPEEC)
EPA-HQ-OAR-2022-0389-0263	County of Los Angeles CA, Board of Supervisors
EPA-HQ-OAR-2022-0389-0265	Alaska Community Action on Toxics (ACAT)
EPA-HQ-OAR-2022-0389-0266	Alaska Community Action on Toxics et al.
EPA-HQ-OAR-2022-0389-0267	Alaska Community Action on Toxics et al.
EPA-HQ-OAR-2022-0389-0268	Petitioners
EPA-HQ-OAR-2022-0389-0269	Kevin Purtee
EPA-HQ-OAR-2022_0389-0270	Dell Salza
EPA-HQ-OAR-2022_0389-0271	Anonymous
EPA-HQ-OAR-2022_0389-0272	Anonymous
EPA-HQ-OAR-2022_0389-0273	Julie Schwam Harris
EPA-HQ-OAR-2022_0389-0277	Dallas Callahan
EPA-HQ-OAR-2022_0389-0280	Bill Nierstedt
EPA-HQ-OAR-2022_0389-0281	Terry Brownfield
EPA-HQ-OAR-2022_0389-0282	Paula Morrow
EPA-HQ-OAR-2022_0389-0283	Mark Barone
EPA-HQ-OAR-2022_0389-0284	Jody Benjamin
EPA-HQ-OAR-2022_0389-0285	Jim Long
EPA-HQ-OAR-2022_0389-0286	Kent Borges
EPA-HQ-OAR-2022_0389-0288	Alexander Oehrlein
EPA-HQ-OAR-2022_0389-0289	Naomi Pless
EPA-HQ-OAR-2022_0389-0290	Bruce Hlodnicki
EPA-HQ-OAR-2022_0389-0292	James Klein

EPA-HQ-OAR-2022_0389-0293	Betty Thompson
EPA-HQ-OAR-2022_0389-0294	Andria Payne
EPA-HQ-OAR-2022_0389-0295	Lane Trippe
EPA-HQ-OAR-2022_0389-0296	Mark Meeks
EPA-HQ-OAR-2022_0389-0297	John Wagner
EPA-HQ-OAR-2022_0389-0298	Diane Daiute
EPA-HQ-OAR-2022_0389-0299	Barbara Fant
EPA-HQ-OAR-2022_0389-0300	Keigler Michele
EPA-HQ-OAR-2022_0389-0301	Carol Brock
EPA-HQ-OAR-2022_0389-0302	Debra Levinson
EPA-HQ-OAR-2022_0389-0303	Dave Potter
EPA-HQ-OAR-2022_0389-0305	Dorie Reisenweber
EPA-HQ-OAR-2022_0389-0306	Mary Ann Hart
EPA-HQ-OAR-2022_0389-0308	Molly Niven
EPA-HQ-OAR-2022_0389-0309	Craig Wallentine
EPA-HQ-OAR-2022_0389-0310	Peter Jones
EPA-HQ-OAR-2022_0389-0311	Michael Scott
EPA-HQ-OAR-2022_0389-0312	Kara Masters
EPA-HQ-OAR-2022_0389-0315	Robin Vesey
EPA-HQ-OAR-2022_0389-0316	Joyce King
EPA-HQ-OAR-2022_0389-0317	Doug Metzler
EPA-HQ-OAR-2022_0389-0318	Laura Ziegler
EPA-HQ-OAR-2022_0389-0319	Carol Steinhart
EPA-HQ-OAR-2022_0389-0320	Elaine Friedrick
EPA-HQ-OAR-2022_0389-0321	John Holstein
EPA-HQ-OAR-2022_0389-0322	Cassandra Pierson
EPA-HQ-OAR-2022_0389-0323	David Bishton
EPA-HQ-OAR-2022_0389-0324	Anonymous
EPA-HQ-OAR-2022_0389-0325	Lorna Emdy
EPA-HQ-OAR-2022_0389-0326	Jim Woolly
EPA-HQ-OAR-2022_0389-0327	Timothy Bardell
EPA-HQ-OAR-2022_0389-0328	Donna Carswell
EPA-HQ-OAR-2022_0389-0329	Deb Merchant
EPA-HQ-OAR-2022_0389-0330	John Commerford
EPA-HQ-OAR-2022_0389-0331	Alan Feltman
EPA-HQ-OAR-2022_0389-0332	Peter Liepmann
EPA-HQ-OAR-2022_0389-0333	Rich Elam
EPA-HQ-OAR-2022_0389-0335	Mary Stewart
EPA-HQ-OAR-2022_0389-0338	Karon Johnson
EPA-HQ-OAR-2022_0389-0340	Louisa McCleary
EPA-HQ-OAR-2022_0389-0341	Leslie Friedman
EPA-HQ-OAR-2022_0389-0343	Dale Bickenbach
EPA-HQ-OAR-2022_0389-0344	ML Menikheim

EPA-HQ-OAR-2022_0389-0345	Meredith OConnor
EPA-HQ-OAR-2022_0389-0347	Christopher Hamilton
EPA-HQ-OAR-2022_0389-0348	David Williams
EPA-HQ-OAR-2022_0389-0350	Scott Forrest
EPA-HQ-OAR-2022_0389-0351	Mary Florence Brink
EPA-HQ-OAR-2022_0389-0352	Sharon Burke
EPA-HQ-OAR-2022_0389-0353	Russell Smith
EPA-HQ-OAR-2022_0389-0354	C Wulff
EPA-HQ-OAR-2022_0389-0355	Mike Ellison
EPA-HQ-OAR-2022_0389-0356	Dylan Johnson
EPA-HQ-OAR-2022_0389-0357	Kate Considine
EPA-HQ-OAR-2022_0389-0358	Lawrence Rosin
EPA-HQ-OAR-2022_0389-0359	Andre Nagel
EPA-HQ-OAR-2022_0389-0360	Craig Zarlring
EPA-HQ-OAR-2022_0389-0361	Emily Ecker
EPA-HQ-OAR-2022_0389-0362	Virginia Lee
EPA-HQ-OAR-2022_0389-0363	Gloria Richmond
EPA-HQ-OAR-2022_0389-0365	L.W. Brown
EPA-HQ-OAR-2022_0389-0366	Henry Morgen
EPA-HQ-OAR-2022_0389-0367	Darcy Struckman
EPA-HQ-OAR-2022_0389-0368	Susan Khalsa-Wyborski
EPA-HQ-OAR-2022_0389-0369	Andrea Matsushima
EPA-HQ-OAR-2022_0389-0370	Michael Snow
EPA-HQ-OAR-2022_0389-0371	Daniel Davids
EPA-HQ-OAR-2022_0389-0372	James Phillips-farley
EPA-HQ-OAR-2022_0389-0373	Marina Atlas
EPA-HQ-OAR-2022_0389-0374	Jackie Thiry
EPA-HQ-OAR-2022_0389-0375	Elizabeth Wiskowski
EPA-HQ-OAR-2022_0389-0376	Liz Temple
EPA-HQ-OAR-2022_0389-0377	Patricia Pople
EPA-HQ-OAR-2022_0389-0378	Marie Schultz
EPA-HQ-OAR-2022_0389-0379	Mary Junek
EPA-HQ-OAR-2022_0389-0380	Nancy Carol Traeger
EPA-HQ-OAR-2022_0389-0381	Kate Kenner
EPA-HQ-OAR-2022_0389-0382	Galen Knight
EPA-HQ-OAR-2022_0389-0383	Molly Niven
EPA-HQ-OAR-2022_0389-0384	Jerry Hickson
EPA-HQ-OAR-2022_0389-0385	Charlotte Fremaux
EPA-HQ-OAR-2022_0389-0386	Rebecca Baggett
EPA-HQ-OAR-2022_0389-0387	Susan Stafford
EPA-HQ-OAR-2022_0389-0388	Dennis DeMuth
EPA-HQ-OAR-2022_0389-0389	Kerstin Milauskas
EPA-HQ-OAR-2022_0389-0390	Wendy Gordon

EPA-HQ-OAR-2022_0389-0391	E Worthington
EPA-HQ-OAR-2022_0389-0392	Linda Jung
EPA-HQ-OAR-2022_0389-0393	Todd Gutmann
EPA-HQ-OAR-2022_0389-0394	Brandon Restler
EPA-HQ-OAR-2022_0389-0395	Erik Tomson
EPA-HQ-OAR-2022_0389-0396	Ellen Henry
EPA-HQ-OAR-2022_0389-0397	Kathryn Wild
EPA-HQ-OAR-2022_0389-0398	Evelyn Farbman
EPA-HQ-OAR-2022_0389-0399	Susan Rodriguez
EPA-HQ-OAR-2022_0389-0400	Elizabeth Riebschlaeger
EPA-HQ-OAR-2022_0389-0401	Ann Prentice
EPA-HQ-OAR-2022_0389-0402	Marc Fleisher
EPA-HQ-OAR-2022_0389-0403	jeremy fryberger
EPA-HQ-OAR-2022_0389-0405	Linda Lobik
EPA-HQ-OAR-2022_0389-0406	Matty Wuest
EPA-HQ-OAR-2022_0389-0407	David Pedersen
EPA-HQ-OAR-2022_0389-0408	Jesse Reyes
EPA-HQ-OAR-2022_0389-0409	Catherine Carter
EPA-HQ-OAR-2022_0389-0410	Sj Worthman
EPA-HQ-OAR-2022_0389-0411	Marcelo Bermann
EPA-HQ-OAR-2022_0389-0412	Irene Svete
EPA-HQ-OAR-2022_0389-0413	Roberta Maynard
EPA-HQ-OAR-2022_0389-0414	Elizabeth Sexton
EPA-HQ-OAR-2022_0389-0415	Alyssa Alvarado
EPA-HQ-OAR-2022_0389-0416	Sherry Kessel
EPA-HQ-OAR-2022_0389-0417	Karin Hemmingsen
EPA-HQ-OAR-2022_0389-0418	Sally Kaufman
EPA-HQ-OAR-2022_0389-0419	William Jackson
EPA-HQ-OAR-2022_0389-0421	Felicito Guerrero
EPA-HQ-OAR-2022_0389-0422	Gwendolyn Wright
EPA-HQ-OAR-2022_0389-0423	Michael Marure
EPA-HQ-OAR-2022_0389-0424	Agustin Jaimes Moreno
EPA-HQ-OAR-2022_0389-0425	Steven Marure
EPA-HQ-OAR-2022_0389-0426	Alma Bailon
EPA-HQ-OAR-2022_0389-0427	Hortencia Laguna
EPA-HQ-OAR-2022_0389-0429	Rosaura Vivanco
EPA-HQ-OAR-2022_0389-0430	Patricia Vazquez
EPA-HQ-OAR-2022_0389-0431	Peter Wang
EPA-HQ-OAR-2022_0389-0432	Mimi Sandeen
EPA-HQ-OAR-2022_0389-0433	Elaine Mayer
EPA-HQ-OAR-2022_0389-0434	Mindy Yanish
EPA-HQ-OAR-2022_0389-0435	Diane Fails
EPA-HQ-OAR-2022_0389-0436	Amador Torralba

EPA-HQ-OAR-2022_0389-0437	Teresa Martinez
EPA-HQ-OAR-2022_0389-0438	Heather Saul
EPA-HQ-OAR-2022_0389-0439	Dani Gioseffi
EPA-HQ-OAR-2022_0389-0440	Margaret Barrett
EPA-HQ-OAR-2022_0389-0441	Nancy Campbell
EPA-HQ-OAR-2022_0389-0442	Joseph Swalinkavich
EPA-HQ-OAR-2022_0389-0443	Barry Cheney
EPA-HQ-OAR-2022_0389-0444	Brenda Frey
EPA-HQ-OAR-2022_0389-0445	Ellen Isaly
EPA-HQ-OAR-2022_0389-0446	Jess Zelniker
EPA-HQ-OAR-2022_0389-0447	MaryAnn and Frank Graffagnino
EPA-HQ-OAR-2022_0389-0448	Judy Lukasiewicz
EPA-HQ-OAR-2022_0389-0449	Anonymous
EPA-HQ-OAR-2022_0389-0450	Carol Gibson-Kish
EPA-HQ-OAR-2022_0389-0451	Cynthia Hathaway
EPA-HQ-OAR-2022_0389-0452	Susan Derry
EPA-HQ-OAR-2022_0389-0453	Janice Gintzler
EPA-HQ-OAR-2022_0389-0454	Irene Alexakos
EPA-HQ-OAR-2022_0389-0455	Christine Hoex
EPA-HQ-OAR-2022_0389-0456	Caroline Kunitake
EPA-HQ-OAR-2022_0389-0457	Susan Stoll
EPA-HQ-OAR-2022_0389-0458	K. H. Burgess
EPA-HQ-OAR-2022_0389-0459	Eleanor Saunders
EPA-HQ-OAR-2022_0389-0460	Thomas Seaman
EPA-HQ-OAR-2022_0389-0461	Jeffrey DeCristofaro
EPA-HQ-OAR-2022_0389-0462	W. Liepmann
EPA-HQ-OAR-2022_0389-0463	Thomas Filardo
EPA-HQ-OAR-2022_0389-0464	Richard McDonald
EPA-HQ-OAR-2022_0389-0465	Edward Simpson
EPA-HQ-OAR-2022_0389-0466	Charles and Nancy Bagley
EPA-HQ-OAR-2022_0389-0467	Elaine Mayer
EPA-HQ-OAR-2022_0389-0468	Andrew Rosenthal
EPA-HQ-OAR-2022_0389-0469	Jeremy Ehrlich
EPA-HQ-OAR-2022_0389-0470	Galen Knight
EPA-HQ-OAR-2022_0389-0471	Sonja Hahn
EPA-HQ-OAR-2022_0389-0472	Linda Moss
EPA-HQ-OAR-2022_0389-0473	Anonymous
EPA-HQ-OAR-2022_0389-0474	Aaron Ahern
EPA-HQ-OAR-2022_0389-0475	Jeanette Wheat
EPA-HQ-OAR-2022_0389-0476	Mike Powers
EPA-HQ-OAR-2022_0389-0477	Dillon Heist
EPA-HQ-OAR-2022_0389-0478	Steven Jones
EPA-HQ-OAR-2022_0389-0479	Alice Nguyen

EPA-HQ-OAR-2022_0389-0480	Sarah Kavage
EPA-HQ-OAR-2022_0389-0481	Katie Ruthenberg
EPA-HQ-OAR-2022_0389-0482	Stanislav Pakarin
EPA-HQ-OAR-2022_0389-0483	Margy Laughlin
EPA-HQ-OAR-2022_0389-0484	Charlie Waugh
EPA-HQ-OAR-2022_0389-0485	Italia Salvaje
EPA-HQ-OAR-2022_0389-0486	Cynthia Ervin
EPA-HQ-OAR-2022_0389-0487	Paula O'Brien
EPA-HQ-OAR-2022_0389-0488	GrotonAyer Buzz
EPA-HQ-OAR-2022_0389-0489	Mary Hollen
EPA-HQ-OAR-2022_0389-0491	Anonymous
EPA-HQ-OAR-2022_0389-0492	Anonymous
EPA-HQ-OAR-2022_0389-0493	Krissa Dutton-Schandelmaier
EPA-HQ-OAR-2022_0389-0494	David Hazen
EPA-HQ-OAR-2022_0389-0495	Gregory Hill
EPA-HQ-OAR-2022_0389-0496	Diane Bloom
EPA-HQ-OAR-2022_0389-0497	Jessica Lisovsky
EPA-HQ-OAR-2022_0389-0498	Sharon Enzi
EPA-HQ-OAR-2022_0389-0499	Stephane Ernoux
EPA-HQ-OAR-2022_0389-0500	Carla Campbell
EPA-HQ-OAR-2022_0389-0501	Michael Kemper
EPA-HQ-OAR-2022_0389-0502	Lani Hummel
EPA-HQ-OAR-2022_0389-0503	Ryan Rayburn
EPA-HQ-OAR-2022_0389-0504	Sue Chartock
EPA-HQ-OAR-2022_0389-0505	Kathryn Slye
EPA-HQ-OAR-2022_0389-0506	Richard Rogers
EPA-HQ-OAR-2022_0389-0507	Anonymous
EPA-HQ-OAR-2022_0389-0508	John Cullen
EPA-HQ-OAR-2022_0389-0509	James Moore
EPA-HQ-OAR-2022_0389-0510	Charlene Willey
EPA-HQ-OAR-2022_0389-0511	Liz Szabo
EPA-HQ-OAR-2022_0389-0513	Brenda Frey
EPA-HQ-OAR-2022_0389-0514	M. Mayer
EPA-HQ-OAR-2022_0389-0515	Marc Fleisher
EPA-HQ-OAR-2022_0389-0516	Elizabeth Henry
EPA-HQ-OAR-2022_0389-0517	Anonymous
EPA-HQ-OAR-2022_0389-0518	Theodore Weinreich
EPA-HQ-OAR-2022_0389-0519	Joseph Wiesner
EPA-HQ-OAR-2022_0389-0520	Margaret Kitts
EPA-HQ-OAR-2022_0389-0521	Patrick McKee
EPA-HQ-OAR-2022_0389-0522	Debra Taylor
EPA-HQ-OAR-2022_0389-0523	Eileen Walz
EPA-HQ-OAR-2022_0389-0524	sharon tkacz

EPA-HQ-OAR-2022_0389-0526	Mary Reed
EPA-HQ-OAR-2022_0389-0527	Rona Fried
EPA-HQ-OAR-2022_0389-0528	Ann Brodek
EPA-HQ-OAR-2022_0389-0529	Don Callahan
EPA-HQ-OAR-2022_0389-0530	Anne Wilson
EPA-HQ-OAR-2022_0389-0531	Victor Babbitt
EPA-HQ-OAR-2022_0389-0532	Pamela Osgood
EPA-HQ-OAR-2022_0389-0533	Nina Koltnow
EPA-HQ-OAR-2022_0389-0534	Cecilia Wirth
EPA-HQ-OAR-2022_0389-0535	L Sulda
EPA-HQ-OAR-2022_0389-0536	Elaine Mayer
EPA-HQ-OAR-2022_0389-0537	James Boone
EPA-HQ-OAR-2022_0389-0538	Noelle Roni
EPA-HQ-OAR-2022_0389-0539	Catherine Carter
EPA-HQ-OAR-2022_0389-0540	Pearl Karon
EPA-HQ-OAR-2022_0389-0541	Linda Schneider
EPA-HQ-OAR-2022_0389-0542	Donna Reilly
EPA-HQ-OAR-2022_0389-0543	Town Village Aircraft Safety Noise Abatement Committee. TVASNAC. Town of Hempstead New York.
EPA-HQ-OAR-2022_0389-0544	David Bezanson
EPA-HQ-OAR-2022_0389-0545	Rachael Bishop
EPA-HQ-OAR-2022_0389-0546	Janet Alward
EPA-HQ-OAR-2022_0389-0547	Don Lipmanson
EPA-HQ-OAR-2022_0389-0548	Edward Funnell
EPA-HQ-OAR-2022_0389-0549	Margaret Barrett
EPA-HQ-OAR-2022_0389-0550	Elizabeth Riebschlaeger
EPA-HQ-OAR-2022_0389-0551	Elaine Swanson
EPA-HQ-OAR-2022_0389-0552	Raymond Smith
EPA-HQ-OAR-2022_0389-0553	Marcia Van Eden
EPA-HQ-OAR-2022_0389-0554	JP Herman
EPA-HQ-OAR-2022_0389-0555	Victoria Grayland
EPA-HQ-OAR-2022_0389-0556	Patrice Curedale
EPA-HQ-OAR-2022_0389-0557	Carol Landis
EPA-HQ-OAR-2022_0389-0558	John Pooley
EPA-HQ-OAR-2022_0389-0559	Donna Grace
EPA-HQ-OAR-2022_0389-0560	Sheri Kuticka
EPA-HQ-OAR-2022_0389-0562	Louise Stanton
EPA-HQ-OAR-2022_0389-0563	Kathryn McKenzie
EPA-HQ-OAR-2022_0389-0564	Laurie Chin Sayres
EPA-HQ-OAR-2022_0389-0565	Jennifer Brooks
EPA-HQ-OAR-2022_0389-0566	Suzan Fleischman
EPA-HQ-OAR-2022_0389-0567	Gary Platner

EPA-HQ-OAR-2022_0389-0568	Roger Martin
EPA-HQ-OAR-2022_0389-0569	David Malmsten
EPA-HQ-OAR-2022_0389-0570	Gary Keyes
EPA-HQ-OAR-2022_0389-0571	Brian Hoover
EPA-HQ-OAR-2022_0389-0572	Anonymous
EPA-HQ-OAR-2022_0389-0573	Elizabeth Heidl
EPA-HQ-OAR-2022_0389-0574	Sherman Lewis
EPA-HQ-OAR-2022_0389-0575	Ruth Fruland
EPA-HQ-OAR-2022_0389-0576	Ulysses Lateiner
EPA-HQ-OAR-2022_0389-0577	Diane Waller
EPA-HQ-OAR-2022_0389-0578	Gloriana Casey
EPA-HQ-OAR-2022_0389-0579	Pamela Weinstein
EPA-HQ-OAR-2022_0389-0580	Curt Johnson
EPA-HQ-OAR-2022_0389-0581	Pamela Weaver
EPA-HQ-OAR-2022_0389-0582	Jo B.
EPA-HQ-OAR-2022_0389-0583	Michael Carpenter
EPA-HQ-OAR-2022_0389-0585	Angela Weiss
EPA-HQ-OAR-2022_0389-0586	John Miller
EPA-HQ-OAR-2022_0389-0587	Elizabeth Willis
EPA-HQ-OAR-2022_0389-0588	Terry Burns
EPA-HQ-OAR-2022_0389-0589	Paul Davis
EPA-HQ-OAR-2022_0389-0590	Anonymous
EPA-HQ-OAR-2022_0389-0591	Susan Rodriguez
EPA-HQ-OAR-2022_0389-0593	Liz Campbell
EPA-HQ-OAR-2022_0389-0594	Lisa Mills
EPA-HQ-OAR-2022_0389-0595	Edward Simpson
EPA-HQ-OAR-2022_0389-0596	Sylvie Karlsda
EPA-HQ-OAR-2022_0389-0598	Sarah Roberts
EPA-HQ-OAR-2022_0389-0599	Karen Stapelfeldt
EPA-HQ-OAR-2022_0389-0600	Linda Agerbak
EPA-HQ-OAR-2022_0389-0601	Frances Walker
EPA-HQ-OAR-2022_0389-0602	Den Mark Wichar
EPA-HQ-OAR-2022_0389-0603	Mark Grassman
EPA-HQ-OAR-2022_0389-0604	Peter Macfarlane
EPA-HQ-OAR-2022_0389-0605	Torger Johnson
EPA-HQ-OAR-2022_0389-0606	Richard Ramirez
EPA-HQ-OAR-2022_0389-0607	Pamela Lowry
EPA-HQ-OAR-2022_0389-0608	Stephen Bailey
EPA-HQ-OAR-2022_0389-0609	Richard Handler
EPA-HQ-OAR-2022_0389-0611	Pamela Holley-Wilcox
EPA-HQ-OAR-2022_0389-0612	Julia McCormick
EPA-HQ-OAR-2022_0389-0613	Constance Jackson
EPA-HQ-OAR-2022_0389-0614	Leslie Sand

EPA-HQ-OAR-2022_0389-0615	Joan Donovan
EPA-HQ-OAR-2022_0389-0616	JOSEPH MAURER
EPA-HQ-OAR-2022_0389-0617	Lex Nino
EPA-HQ-OAR-2022_0389-0618	John Schreiber
EPA-HQ-OAR-2022_0389-0619	Patricia Ziegler
EPA-HQ-OAR-2022_0389-0620	Mindy Rouff
EPA-HQ-OAR-2022_0389-0621	Elizabeth Ann Dowds
EPA-HQ-OAR-2022_0389-0622	Mary Bull
EPA-HQ-OAR-2022_0389-0623	Judith Tylke
EPA-HQ-OAR-2022_0389-0624	Jessica Gibson
EPA-HQ-OAR-2022_0389-0625	Harold Shapiro
EPA-HQ-OAR-2022_0389-0626	Silvia Newhall
EPA-HQ-OAR-2022_0389-0627	Anonymous
EPA-HQ-OAR-2022_0389-0628	Heather Saul
EPA-HQ-OAR-2022_0389-0629	Kelly Doolittle
EPA-HQ-OAR-2022_0389-0630	Meredith Randall
EPA-HQ-OAR-2022_0389-0631	Joyce King
EPA-HQ-OAR-2022_0389-0632	Mark Petzold
EPA-HQ-OAR-2022_0389-0633	Karin Hemmingsen
EPA-HQ-OAR-2022_0389-0634	Jessica Kuzmier
EPA-HQ-OAR-2022_0389-0635	Anonymous
EPA-HQ-OAR-2022_0389-0636	Cynthia Lawton-Singer
EPA-HQ-OAR-2022_0389-0637	Anthony Mccutchan
EPA-HQ-OAR-2022_0389-0638	Jud Lane
EPA-HQ-OAR-2022_0389-0639	Carl Potter
EPA-HQ-OAR-2022_0389-0640	Creighton King
EPA-HQ-OAR-2022_0389-0641	Dave Embry
EPA-HQ-OAR-2022_0389-0642	Anonymous
EPA-HQ-OAR-2022_0389-0643	Hasibe Caballero-Gomez
EPA-HQ-OAR-2022_0389-0644	Chandra Patey
EPA-HQ-OAR-2022_0389-0645	Anonymous
EPA-HQ-OAR-2022_0389-0646	Groton Ayer Buzz
EPA-HQ-OAR-2022_0389-0647	Jeff Cordes
EPA-HQ-OAR-2022_0389-0648	Julian Park
EPA-HQ-OAR-2022_0389-0649	Aaron Lucas
EPA-HQ-OAR-2022_0389-0650	Anonymous
EPA-HQ-OAR-2022_0389-0651	Anonymous
EPA-HQ-OAR-2022_0389-0652	Chris Dicesare
EPA-HQ-OAR-2022_0389-0653	Kerr Bisch
EPA-HQ-OAR-2022_0389-0654	Andrew Calcagno
EPA-HQ-OAR-2022_0389-0655	Travis Alexander
EPA-HQ-OAR-2022_0389-0656	Anonymous
EPA-HQ-OAR-2022_0389-0657	Jim Wreyford

EPA-HQ-OAR-2022_0389-0658	Peter Kanz
EPA-HQ-OAR-2022_0389-0659	Peter Roelands
EPA-HQ-OAR-2022_0389-0660	Anonymous
EPA-HQ-OAR-2022_0389-0661	Stephanie Emery
EPA-HQ-OAR-2022_0389-0662	JDB
EPA-HQ-OAR-2022_0389-0663	Kay Frizzell
EPA-HQ-OAR-2022_0389-0664	Eric Baquero
EPA-HQ-OAR-2022_0389-0665	Anonymous
EPA-HQ-OAR-2022_0389-0666	Anonymous
EPA-HQ-OAR-2022_0389-0667	Michelle Louis
EPA-HQ-OAR-2022_0389-0668	Anonymous
EPA-HQ-OAR-2022_0389-0669	Cathy Page
EPA-HQ-OAR-2022_0389-0670	Nancy McGill
EPA-HQ-OAR-2022_0389-0671	Myrna Solganick
EPA-HQ-OAR-2022_0389-0672	Renee Christian
EPA-HQ-OAR-2022_0389-0673	Darlene Yaplee
EPA-HQ-OAR-2022_0389-0674	Burton Hunter
EPA-HQ-OAR-2022_0389-0675	Montgomery County Quiet Skies Coalition, Ltd.
EPA-HQ-OAR-2022_0389-0676	Betty Solek
EPA-HQ-OAR-2022_0389-0677	Hope Nelson
EPA-HQ-OAR-2022_0389-0678	Peter Ewert
EPA-HQ-OAR-2022_0389-0679	James Rausch
EPA-HQ-OAR-2022_0389-0680	Bethany Rondeau
EPA-HQ-OAR-2022_0389-0681	Anonymous
EPA-HQ-OAR-2022_0389-0682	Cassell Neighborhood Association
EPA-HQ-OAR-2022_0389-0683	Chris Bailey
EPA-HQ-OAR-2022_0389-0684	Pennsylvania Chapter of the American Academy of Pediatrics
EPA-HQ-OAR-2022_0389-0685	SK Vargas
EPA-HQ-OAR-2022_0389-0686	Brian Gomez
EPA-HQ-OAR-2022_0389-0687	Christopher Lish
EPA-HQ-OAR-2022_0389-0688	Phillip Witt
EPA-HQ-OAR-2022_0389-0689	Luke Bruns
EPA-HQ-OAR-2022_0389-0690	Rocky Harrell
EPA-HQ-OAR-2022_0389-0691	Quiet Communities, Inc.
EPA-HQ-OAR-2022_0389-0692	Clu Colvin
EPA-HQ-OAR-2022_0389-0693	Town of Danvers, Massachusetts
EPA-HQ-OAR-2022_0389-0694	David Bradshaw
EPA-HQ-OAR-2022_0389-0695	Anonymous
EPA-HQ-OAR-2022_0389-0696	Mary Walker
EPA-HQ-OAR-2022_0389-0697	Steven Miller
EPA-HQ-OAR-2022_0389-0698	Pacoima Beautiful, Annakaren Ramirez
EPA-HQ-OAR-2022_0389-0699	Tony Romero

EPA-HQ-OAR-2022_0389-0700	Latinos United for a New America (LUNA)
EPA-HQ-OAR-2022_0389-0701	Cesar Navarro
EPA-HQ-OAR-2022_0389-0702	Latinos Unidos Por Una Nueva America
EPA-HQ-OAR-2022_0389-0703	Geoffrey Swain
EPA-HQ-OAR-2022_0389-0704	Richard Holtz
EPA-HQ-OAR-2022_0389-0705	Rob Reece
EPA-HQ-OAR-2022_0389-0706	Estefania Bautista
EPA-HQ-OAR-2022_0389-0707	Randy Richmond
EPA-HQ-OAR-2022_0389-0708	Tim Martin
EPA-HQ-OAR-2022_0389-0709	Yasmin Mata
EPA-HQ-OAR-2022_0389-0710	Jay Nowak
EPA-HQ-OAR-2022_0389-0711	Brandon Jewett
EPA-HQ-OAR-2022_0389-0712	DAN DREW
EPA-HQ-OAR-2022_0389-0713	Mark Colman
EPA-HQ-OAR-2022_0389-0714	Ellie Lichti
EPA-HQ-OAR-2022_0389-0715	Mark Zuberek
EPA-HQ-OAR-2022_0389-0717	Jonathan Esty
EPA-HQ-OAR-2022_0389-0718	John Engard
EPA-HQ-OAR-2022_0389-0719	Barbara Fuoco
EPA-HQ-OAR-2022_0389-0720	James Boone
EPA-HQ-OAR-2022_0389-0721	Michelle Williams
EPA-HQ-OAR-2022_0389-0722	Amrita Burdick
EPA-HQ-OAR-2022_0389-0723	Maureen Kilroy
EPA-HQ-OAR-2022_0389-0724	Hannah MacLaren
EPA-HQ-OAR-2022_0389-0725	S. H.
EPA-HQ-OAR-2022_0389-0726	Dwight Johnson
EPA-HQ-OAR-2022_0389-0727	Todd Gutmann
EPA-HQ-OAR-2022_0389-0728	Paul Meyers
EPA-HQ-OAR-2022_0389-0729	Paul Scudder
EPA-HQ-OAR-2022_0389-0730	Sheila Macmanus
EPA-HQ-OAR-2022_0389-0731	K Christopher
EPA-HQ-OAR-2022_0389-0732	Broadway Flushing Homeowners Association
EPA-HQ-OAR-2022_0389-0733	Anne Kroeker
EPA-HQ-OAR-2022_0389-0734	Nastassia Barber
EPA-HQ-OAR-2022_0389-0735	Michael McTernan
EPA-HQ-OAR-2022_0389-0736	Greg Bell
EPA-HQ-OAR-2022_0389-0737	Teodora Reyes
EPA-HQ-OAR-2022_0389-0738	William Kyle
EPA-HQ-OAR-2022_0389-0739	Danny Johnson
EPA-HQ-OAR-2022_0389-0740	Kerry McCarthy
EPA-HQ-OAR-2022_0389-0741	Meghan Pierce
EPA-HQ-OAR-2022_0389-0742	Gregory Hutchins
EPA-HQ-OAR-2022_0389-0743	Scott Robinson

EPA-HQ-OAR-2022_0389-0744	Say NO to East Hampton Airport, Inc.
EPA-HQ-OAR-2022_0389-0745	K Zolvik
EPA-HQ-OAR-2022_0389-0746	Mike McTernan
EPA-HQ-OAR-2022_0389-0747	Anonymous
EPA-HQ-OAR-2022_0389-0748	Emmanuel Ambrocio
EPA-HQ-OAR-2022_0389-0749	Monica Palomares
EPA-HQ-OAR-2022_0389-0751	Anonymous
EPA-HQ-OAR-2022_0389-0752	Susan Stinson
EPA-HQ-OAR-2022_0389-0753	Anonymous
EPA-HQ-OAR-2022_0389-0754	Anonymous
EPA-HQ-OAR-2022_0389-0755	D. Milton
EPA-HQ-OAR-2022_0389-0756	Cynthia Allison
EPA-HQ-OAR-2022_0389-0757	Brandon Bowersox-Johnson
EPA-HQ-OAR-2022_0389-0758	Peggy Printz
EPA-HQ-OAR-2022_0389-0759	Andrea Thompson
EPA-HQ-OAR-2022_0389-0760	Marilyn Miller
EPA-HQ-OAR-2022_0389-0761	Anne Cassebaum
EPA-HQ-OAR-2022_0389-0762	Taylor Elop
EPA-HQ-OAR-2022_0389-0763	Linda Schneider
EPA-HQ-OAR-2022_0389-0764	Melinda Holman
EPA-HQ-OAR-2022_0389-0765	Janet Jordan
EPA-HQ-OAR-2022-0389-0766	David Wartofsky
EPA-HQ-OAR-2022_0389-0768	Edward L. Simpson
EPA-HQ-OAR-2022_0389-0769	Lori Shepler
EPA-HQ-OAR-2022_0389-0770	Donna Patrick
EPA-HQ-OAR-2022-0389-0771	National Agricultural Aviation Association (NAAA)
EPA-HQ-OAR-2022-0389-0772	Arapahoe County, Board of County Commissioners
EPA-HQ-OAR-2022-0389-TRANS-001	Senior Coordinator of the FAA-Industry EAGLE program, Robert Olislagers
EPA-HQ-OAR-2022-0389-TRANS-002	Latinos United for a New America, Mayra Pelagio
EPA-HQ-OAR-2022-0389-TRANS-003	Migdalia Rodriguez-Cubides
EPA-HQ-OAR-2022-0389-TRANS-004	Maricela Lechuga
EPA-HQ-OAR-2022-0389-TRANS-005	Duwamish River Community Coalition, Christian Poulsen
EPA-HQ-OAR-2022-0389-TRANS-006	Richard Offerman
EPA-HQ-OAR-2022-0389-TRANS-007	Plane Sense 4 Long Island, Elaine Miller
EPA-HQ-OAR-2022-0389-TRANS-008	Dorinne Tye
EPA-HQ-OAR-2022-0389-TRANS-009	Amalia Ponce
EPA-HQ-OAR-2022-0389-TRANS-010	Cassell Community , Veronica Licon
EPA-HQ-OAR-2022-0389-TRANS-011	Deputy County Executive, County of Santa Clara, Sylvia Gallegos
EPA-HQ-OAR-2022-0389-TRANS-012	Simon Fraser University, on behalf of the County of Santa Clara, Bruce Lanphear

EPA-HQ-OAR-2022-0389-TRANS-013	Stanford Environmental Law Clinic, on behalf of the County of Santa Clara, Sydney Speizman
EPA-HQ-OAR-2022-0389-TRANS-014	Earthjustice, Nathan Park
EPA-HQ-OAR-2022-0389-TRANS-015	Natural Resources Defense Council, Cecelia Segal
EPA-HQ-OAR-2022-0389-TRANS-016	Citizens Against Gillespie Expansion and Low Flying Aircraft, Gary Keller
EPA-HQ-OAR-2022-0389-TRANS-017	Cassell Neighborhood Association, Ernesto Barajas
EPA-HQ-OAR-2022-0389-TRANS-018	Wisconsin EcoLatinos, Cristina Carvajal
EPA-HQ-OAR-2022-0389-TRANS-019	Center for Environmental Health, Karina Gomez
EPA-HQ-OAR-2022-0389-TRANS-020	Debi Wagner
EPA-HQ-OAR-2022-0389-TRANS-021	Ellen Saunders
EPA-HQ-OAR-2022-0389-TRANS-022	Green America, Todd Larsen
EPA-HQ-OAR-2022-0389-TRANS-023	David Bryce
EPA-HQ-OAR-2022-0389-TRANS-024	Brooke B
EPA-HQ-OAR-2022-0389-TRANS-025	Katherine Riley
EPA-HQ-OAR-2022-0389-TRANS-026	Clean Earth 4 Kids , John Bottorf
EPA-HQ-OAR-2022-0389-TRANS-027	Boston University College of Arts and Sciences Department of Earth and Environment, Richard Reibstein
EPA-HQ-OAR-2022-0389-TRANS-028	Southern Maryland Fair Skies Coalition, James Lawson
EPA-HQ-OAR-2022-0389-TRANS-029	Quiet Collier, Inc., Barbara Kanter
EPA-HQ-OAR-2022-0389-TRANS-030	Friends of the Earth, Marcie Keever
EPA-HQ-OAR-2022-0389-TRANS-031	Eastie Farm, Inc. , Kannan Thiruvengadam
EPA-HQ-OAR-2022-0389-TRANS-032	Karen Porter
EPA-HQ-OAR-2022-0389-TRANS-033	Elizabeth Agramont-Justiano
EPA-HQ-OAR-2022-0389-TRANS-034	Citizens Against Gillespie's Expansion Low Flying Aircraft, Robert Germann

Appendix C. Verbatim Comments Summarized in Sections 1.1 and 1.2

Section 1.1 - General support

Comment Number: EPA-HQ-OAR-2022_0389-0283-0001

Commenter Type: Private Citizen

Commenter: Mark Barone

Organization:

Excerpt Text:

Lead in gasoline has been ban for years! Lets ban it in airplane gas too! Aviation gas is the largest source of lead emissions in the country. Lead exposure is responsible for serious illness including cancer and cardiovascular disease. According to the EPA, Millions of people live near airports where Lead Gas is hurting them, [FL TEXT REMOVED] Sincerely, Mark Barone Salt Lake City, UT 84105

Comment Number: EPA-HQ-OAR-2022_0389-0300-0002

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

Exposure to lead, especially during childhood, can have devastating health effects. Lead exposure is responsible for serious diseases in adults, including cancer and cardiovascular disease.

More than 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0290-0006

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, is highly toxic and its effects are irreversible. It causes anemia and much worse including permanent kidney and brain damage.can. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease. Over 5 million people, including more than 360,000 children under the age of 5, live near one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0289-0003

Commenter Type: Private Citizen

Commenter: Naomi Pless

Organization:

Excerpt Text:

Lead exposure can also cause serious illness in adults, including cancer and cardiovascular disease. According to the US Environmental Protection Agency, over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0587-0002

Commenter Type: Private Citizen

Commenter: Elizabeth Willis

Organization:

Excerpt Text:

Our most vulnerable citizens are our children, the future of our society. As a mother, and now a soon-to-be grandmother, I am acutely aware of the environmental perils that the US government needs to address for the overall health of our citizens.

Comment Number: EPA-HQ-OAR-2022_0389-0541-0001

Commenter Type: Private Citizen

Commenter: Linda Schneider

Organization:

Excerpt Text:

[FL TEXT REMOVED] We worked to get the lead out of cars; I fail to understand why we still allow it in airplanes! [FL TEXT REMOVED] If we wouldn't want it in our backyards or streets, we shouldn't be imposing it on other vulnerable people! I've written about this issue before, but it remains vitally important to me! [FL TEXT REMOVED] Lead is especially toxic to young children and developing brains! We aren't saving money by allowing this continue; we will end up having to pay to undo the damages caused by lead! [FL TEXT REMOVED] Sincerely, Linda Schneider Arlington, VA 22202

Comment Number: EPA-HQ-OAR-2022-0389-0162-0002

Commenter Type: Private Citizen

Commenter: Jean Public

Organization:

Excerpt Text:

jean public@jeanpublic1@gmail.com

i go with testimony of miki barnes as truthful and correct on this issue

Comment Number: EPA-HQ-OAR-2022-0389-0211-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Clean Wisconsin, Coalition on Lead Emergency (COLE), and Midwest Environmental Advocates appreciate the opportunity to submit this letter in support of the Environmental Protection Agency's (EPA) proposed endangerment finding on lead emissions from aviation gasoline. We urge the EPA to

promptly finalize this endangerment finding so that it can take action to address the largest remaining source of lead air emissions.

Comment Number: EPA-HQ-OAR-2022-0389-0211-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: Clean Wisconsin et al.

Excerpt Text:

Adopting the endangerment finding is a crucial first step in addressing the harms of this source of lead pollution. We urge EPA to expeditiously finalize this endangerment finding to protect public health and move all aircraft beyond leaded fuels.

Comment Number: EPA-HQ-OAR-2022-0389-0218-0001

Commenter Type: Private Citizen

Commenter: Corinne Greenman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022-0389-0218-0003

Commenter Type: Private Citizen

Commenter: Corinne Greenman

Organization:

Excerpt Text:

Banning avgas cannot wait. Every day that leaded gasoline is used in piston engine aircraft, communities across the country are breathing in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0768-0001

Commenter Type: Private Citizen

Commenter: Edward L. Simpson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Now is the time to finalize an endangerment finding for leaded aviation gasoline. We must also adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. People live near airports! Multiple studies have shown that children who live near airports have higher levels of lead in their blood. Most of the airports with the

highest lead emissions are in communities of color. The time is now. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Edward L. Simpson South Pasadena, CA 91030

Comment Number: EPA-HQ-OAR-2022_0389-0770-0001

Commenter Type: Private Citizen

Commenter: Donna Patrick

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize your EPA report on endangerment of leaded aviation fuel and adopt rules to eliminate this pollutant. Owners of small planes need to be responsible. It is wrong for this part of our world to be so far behind. It is time to work with the Federal Aviation Administration to quickly ban leaded avgas. Thank you, Donna Patrick 8541 Valley Green Drive SE Olympia, WA 98513 Sincerely, Donna Patrick Olympia, WA 98513

Comment Number: EPA-HQ-OAR-2022-0389-0140-0001

Commenter Type: Private Citizen

Commenter: Bernita Fruhling

Organization:

Excerpt Text:

I strongly support the EPA proposal for a lead endangerment finding for leaded aviation gas.

Comment Number: EPA-HQ-OAR-2022_0389-0761-0001

Commenter Type: Private Citizen

Commenter: Anne Cassebaum

Organization:

Excerpt Text:

Please make final an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I do not have to explain to you the toxicity of lead. Based on the work you have done so far, I carry the hope that you will act quickly.

Comment Number: EPA-HQ-OAR-2022_0389-0741-0001

Commenter Type: Private Citizen

Commenter: Meghan Pierce

Organization:

Excerpt Text:

I strongly support EPA finding that lead air pollution is reasonably anticipated to endanger the public health and welfare under the Clean Air Act and that aircraft using leaded fuel cause or contribute to that pollution.

Comment Number: EPA-HQ-OAR-2022_0389-0749-0001

Commenter Type: Private Citizen

Commenter: Monica Palomares

Organization:

Excerpt Text:

EPA-HQ-OAR-2022-0389 I urge the EPA to protect our communities and regulate leaded airplane fuel. I am worried for my two children who are underage and the health effects. I also worry for my community. I urge the EPA to finalize its finding that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0751-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The EPA should make this finding ASAP and help expedite the change to unleaded aviation fuel. It has already been too long.

Comment Number: EPA-HQ-OAR-2022_0389-0731-0001

Commenter Type: Private Citizen

Commenter: K Christopher

Organization:

Excerpt Text:

I am writing your Office urging you & your Staff to finalize an endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. We don't seek to eat Lead, We don't seek to drink Lead, We don't offer Lead to Loved ones & family during the Holidays, so it doesn't make sense that we should deliberately & knowingly embrace a practice by our Federal Government to BREATHE LEAD either. Lead exposure, particularly during childhood, can result in *devastating* & often times irreversible impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0731-0002

Commenter Type: Private Citizen

Commenter: K Christopher

Organization:

Excerpt Text:

I look to your office to Finalize this endangerment finding as soon as possible, and coordinate with the Federal Aviation Administration to quickly enforce a Phased Out BAN of LEADED AVGAS.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0001

Commenter Type: Private Citizen

Commenter: Anne Kroeker
Organization:

Excerpt Text:

I am a 68 year old conservation and social advocate, writing to you today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0717-0001

Commenter Type: Private Citizen

Commenter: Jonathan Esty

Organization:

Excerpt Text:

I find it very strange that lead compounds are still being used by the aviation industry since it has been 25 years since this additive was banned for automobiles. It is high time the aviation industry catch up to autos in eliminating this environmental destructive chemical. Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0719-0002

Commenter Type: Private Citizen

Commenter: Barbara Fuoco

Organization:

Excerpt Text:

Please finalize the endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0720-0001

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

While the use of leaded gasoline in most cars was banned 25 years ago, leaded aviation gasoline is still used in nearly 170,000 piston-engine aircraft across 20,000 airports. Please finalize an endangerment finding for leaded aviation gasoline and quickly put in place rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0720-0002

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near airports where piston-engine aircraft operate. Multiple studies have shown that children who live near airports have

higher levels of lead in their blood It's time to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0721-0001

Commenter Type: Private Citizen

Commenter: Michelle Williams

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0726-0001

Commenter Type: Private Citizen

Commenter: Dwight Johnson

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0727-0001

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline. This cannot wait.

Comment Number: EPA-HQ-OAR-2022_0389-0727-0002

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

I urge you to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas

Comment Number: EPA-HQ-OAR-2022_0389-0730-0001

Commenter Type: Private Citizen

Commenter: Sheila Macmanus

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline --the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0700-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Latinos United for a New America (LUNA)

Excerpt Text:

I urge the EPA to protect our communities and regulate leaded airplane fuel. It is urgent that EPA finalizes its finding that lead emissions from covered aircraft engines using leaded fuel endanger human health and is a danger to our community.

Comment Number: EPA-HQ-OAR-2022_0389-0699-0001

Commenter Type: Private Citizen

Commenter: Tony Romero

Organization:

Excerpt Text:

I urge the EPA to finalize its finding that lead emissions from covered aircraft engines using lead fuel endanger human health. In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the annual emissions of lead to air in that year. Protecting children's health from environmental risks is fundamental to the EPA's mission.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0004

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

The Environmental Protection Agency needs to move forward immediately to finalize the endangerment finding regarding leaded gas for piston-engine aircraft in the United States and work with the Federal Aviation Administration to quickly ban leaded avgas. As the largest source of airborne lead emissions, it is time you address the critical health issues that this fuel causes to people, communities, and the planet.

Comment Number: EPA-HQ-OAR-2022_0389-0661-0002

Commenter Type: Private Citizen

Commenter: Stephanie Emery

Organization:

Excerpt Text:

It's critical that you finalize this endangerment finding as soon as possible and work with the FAA to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0001

Commenter Type: Private Citizen

Commenter: Christopher Lish
Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0628-0001

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

I am writing today to ask you to finalize an endangerment finding for leaded aviation gasoline. In addition, I ask you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0628-0003

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas to protect our children and their access to a healthy future.

Comment Number: EPA-HQ-OAR-2022_0389-0629-0001

Commenter Type: Private Citizen

Commenter: Kelly Doolittle

Organization:

Excerpt Text:

I have just been learning about this issue concerning leaded aviation fuel. I never knew about this, so I am glad that EarthJustice and other pro-environmental health and safety organizations have been bringing it to the forefront. That's why I'm writing to you today. I want to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0604-0001

Commenter Type: Private Citizen

Commenter: Peter Macfarlane

Organization:

Excerpt Text:

If leaded gasoline is a sufficient danger to warrant its being banned from use in automobiles, there can be no rational reason for allowing its continued use in aircraft. It is no less of a danger. Any release of lead into the atmosphere represents a health hazard. I therefore urge you to finalize an endangerment finding for leaded aviation gasoline ("avgas") and to quickly adopt rules eliminating its use. This is the largest source of lead emissions in the country, and lead exposure, particularly during childhood, can result in devastating impacts on health, not least on neurological development. Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0605-0001

Commenter Type: Private Citizen

Commenter: Torger Johnson

Organization:

Excerpt Text:

Now is the time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gas. Lead contamination currently being released by humans can be reduced by 70% through this one action. More than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0605-0002

Commenter Type: Private Citizen

Commenter: Torger Johnson

Organization:

Excerpt Text:

] Leaded gasoline was banned in most cars 25 years ago, but leaded aviation fuel is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Please do not wait any longer to finalize this endangerment finding and work with the FAA to ban leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0611-0001

Commenter Type: Private Citizen

Commenter: Pamela Holley-Wilcox

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0611-0004

Commenter Type: Private Citizen

Commenter: Pamela Holley-Wilcox

Organization:

Excerpt Text:

To protect public health, please finalize this endangerment finding right away and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0614-0001

Commenter Type: Private Citizen

Commenter: Leslie Sand

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health, including with cancer.

Comment Number: EPA-HQ-OAR-2022_0389-0615-0001

Commenter Type: Private Citizen

Commenter: Joan Donovan

Organization:

Excerpt Text:

Please I urge you to finalize an endangerment finding for leaded aviation gasoline (avgas) and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease!! Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0588-0001

Commenter Type: Private Citizen

Commenter: Terry Burns

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". As a physician I learned long ago of the hazards of lead exposure, particularly during childhood, which can result in lifelong mental deficiency. Lead exposure is responsible for serious illness in adults as well, including cancer and cardiovascular disease. This was all known, and IGNORED, even at the time leaded "ethyl" gasoline was introduced for motor vehicles back in the 1930s. Millions of people suffered for decades until leaded gasoline was banned in most vehicles 25 years ago. I was frankly shocked to learn lead containing avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports, and is now the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0594-0001

Commenter Type: Private Citizen

Commenter: Lisa Mills

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Leaded

gasoline was rightly banned in most cars 25 years ago. Why is avgas is still allowed in aviation? [FL TEXT REMOVED] As you know, [FL TEXT REMOVED] We should not allow this to continue! I urge you to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0573-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Heidl

Organization:

Excerpt Text:

Research on the irreversible dangers of lead to humans, especially children, is irrefutable. The endangerment finding is decades overdue! The 130,000 piston engine aircraft that run on leaded avgas have continued to pollute our air for nearly 3 decades after leaded gas was eliminate for automobiles. Unleaded avgas is available today and will work safely for more than half of the piston engine aircraft in operation. Make the endangerment finding so that we can begin reducing lead in our environment!

Comment Number: EPA-HQ-OAR-2022_0389-0595-0001

Commenter Type: Private Citizen

Commenter: Edward Simpson

Organization:

Excerpt Text:

Please finalize the endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. You know the horrors of lead exposure. Sadly children in poor communities, and often Black children, are victims of the lead poison. They have no chance once they have been exposed, usually most of their childhood. Makes us wonder if these were white, wealthy communities, would this still be an issue? Of course white wealthy communities would never allow such poisons in their neighborhoods. Before more lives are forever harmed

Comment Number: EPA-HQ-OAR-2022_0389-0602-0001

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

I urge you to finalize endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0602-0003

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

Please! Finalize this endangerment finding as soon as possible and work with Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0557

Commenter Type: Private Citizen

Commenter: Carol Landis

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and then quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Even worse, [FL TEXT REMOVED] Sincerely, Carol Landis Johnson City, TN 37601

Comment Number: EPA-HQ-OAR-2022_0389-0560-0001

Commenter Type: Private Citizen

Commenter: Sheri Kuticka

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can impact health. Lead exposure is responsible for illness in adults, including cancer and cardiovascular disease. [FL TEXT REMOVED] Children who live near airports have higher levels of lead in their blood.. [FL TEXT REMOVED] Please finalize this endangerment finding and ban leaded avgas. Sincerely, Sheri Kuticka Concord, CA 94518

Comment Number: EPA-HQ-OAR-2022_0389-0575-0001

Commenter Type: Private Citizen

Commenter: Ruth Fruland

Organization:

Excerpt Text:

Lead is poison. Finalize the endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the USA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Ruth Fruland Seattle, WA 98115

Comment Number: EPA-HQ-OAR-2022_0389-0576-0001

Commenter Type: Private Citizen

Commenter: Ulysses Lateiner

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As the parent of a 6-month-old child, the public health hazards associated with lead are particularly concerning to me.

Comment Number: EPA-HQ-OAR-2022_0389-0576-0002

Commenter Type: Private Citizen

Commenter: Ulysses Lateiner

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft. Please finalize an endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0580-0001

Commenter Type: Private Citizen

Commenter: Curt Johnson

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0585-0001

Commenter Type: Private Citizen

Commenter: Angela Weiss

Organization:

Excerpt Text:

Ban leaded gasoline. I realize nobody cares about anyone except themselves in the US so maybe we could do it to save our own necks. We are at the point of extinction with global warming unless you like 120 degree temperatures and no water. We don't care about kids either. We just want to take womens' rights by protecting a fetus but who cares if the kid gets brain damage from lead poisoning because they live by the airport. Yes, I am a woman and yes I am angry and yes I will expatriate somewhere civilized without a bajillion guns and where women still have rights and are equal when I retire. I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0587-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Willis

Organization:

Excerpt Text:

I write to you today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0536-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health. Over 5 million people live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Sincerely, Elaine Mayer
Minneapolis, MN 55447

Comment Number: EPA-HQ-OAR-2022_0389-0537-0001

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

This issue is important to me as I am sure it is to you as well. Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". This is the largest source of lead emissions in the country. [FL TEXT REMOVED] The time has come! [FL TEXT REMOVED] Thank you for considering my comments. Sincerely, James Boone
Sincerely, James Boone Portland, OR 97229

Comment Number: EPA-HQ-OAR-2022_0389-0539-0001

Commenter Type: Private Citizen

Commenter: Catherine Carter

Organization:

Excerpt Text:

[FL TEXT REMOVED] I think you know all the reasons we're urging this...right? Lead exposure's devastating impacts on health, especially for children. Over 5 million people, including more than 360,000 children under the age of 5, living near at least one of the airports where piston-engine aircraft operate, according to the EPA. They're good reasons. Please let them guide your work, finalize this endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Catherine Carter Cullowhee, NC 28723

Comment Number: EPA-HQ-OAR-2022_0389-0547-0001

Commenter Type: Private Citizen

Commenter: Don Lipmanson

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please quickly adopt an endangerment finding and rules that prohibit use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0549-0001

Commenter Type: Private Citizen

Commenter: Margaret Barrett

Organization:

Excerpt Text:

No doubt you already know how dangerous lead emissions are, especially to children. And no doubt you already know that aviation gasoline, or "avgas", is the largest source of lead emissions in the country. I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of it. [FL TEXT REMOVED] Sincerely, Margaret Barrett Malvern, PA 19355

Comment Number: EPA-HQ-OAR-2022_0389-0550-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Riebschlaeger

Organization:

Excerpt Text:

Lead and its deadly impacts on human health in every form is well known because of the sad stories about whole cities and their children, suffering from its effects. But the biggest source of lead-burning fuel goes unnoticed: aviation fuel. I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Elizabeth Riebschlaeger Victoria, TX 77901

Comment Number: EPA-HQ-OAR-2022_0389-0516-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Henry

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure, particularly during childhood, causes devastating impacts. Lead exposure also caused serious illness in adults, including cancer and cardiovascular disease. Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. Many studies have shown that children who live near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Sincerely, Elizabeth Henry Charlotte, NC 28205

Comment Number: EPA-HQ-OAR-2022_0389-0534-0001

Commenter Type: Private Citizen

Commenter: Cecilia Wirth

Organization:

Excerpt Text:

Docket ID No. EPA-HQ-OAR-2022-0389 I strongly support the EPA proposal for a lead endangerment finding for leaded aviation gas.

Comment Number: EPA-HQ-OAR-2022_0389-0532-0001

Commenter Type: Private Citizen

Commenter: Pamela Osgood

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. Quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Everyone knows that lead is bad for humans and animals and water and air.....bad for life. [FL TEXT REMOVED] Sincerely, Pamela Osgood San Francisco, CA 94110

Comment Number: EPA-HQ-OAR-2022_0389-0527-0001

Commenter Type: Private Citizen

Commenter: Rona Fried

Organization:

Excerpt Text:

Dear Administrator Michael Regan, I was so surprised when I read that leaded gasoline is still used in aviation! I thought those times were long past. So please finalize an endangerment finding for leaded aviation fuel and quickly adopt rules to finally eliminate this unnecessary, poisonous fuel..

Comment Number: EPA-HQ-OAR-2022_0389-0519-0001

Commenter Type: Private Citizen

Commenter: Joseph Wiesner

Organization:

Excerpt Text:

I support the EPA finding that lead air pollution puts public health at risk. It seems clear that aircraft using leaded fuel cause or contribute to that pollution. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0520-0001

Commenter Type: Private Citizen

Commenter: Margaret Kitts

Organization:

Excerpt Text:

I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Exposure to lead can result in devastating impacts on health. , especially in young children. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Banning avgas must be d e now. [FL TEXT REMOVED] This is a serious danger! The time for change is now! Please finalize this endangerment finding as soon as possible and immediately work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Margaret Kitts Lake Forest, CA 92630

Comment Number: EPA-HQ-OAR-2022_0389-0521-0001

Commenter Type: Private Citizen

Commenter: Patrick McKee

Organization:

Excerpt Text:

Please ban leaded aviation gasoline. There are children living near these airports. Just because someone can afford an airplane doesn't give them the right to poison these kids. It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure during childhood can result in devastating impacts on health, and [FL TEXT REMOVED] Leaded avgas presents a strikingly clear equity issue. [FL TEXT REMOVED] Sincerely, Patrick McKee Mercer Island, WA 98040

Comment Number: EPA-HQ-OAR-2022_0389-0467-0002

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

Please finalize this endangerment finding

Comment Number: EPA-HQ-OAR-2022_0389-0454-0001

Commenter Type: Private Citizen

Commenter: Irene Alexakos

Organization:

Excerpt Text:

Dear Administrator Michael Regan, My family would like to see you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of avgas, the largest source of lead emissions in the country. It's time to do this. It's the moral and right thing to do.

Comment Number: EPA-HQ-OAR-2022_0389-0461-0001

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

I am writing to DEMAND you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0461-0003

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

It's ABSOLUTELY MANDATORY you finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas! If you refuse to do so, we global environmental movements are prepared to hold you more than merely accountable for criminal apathy and avarice and call out your crimes on a global scale, and to SUCH an extent that your career or public reputation will NEVER RECOVER!!!

Comment Number: EPA-HQ-OAR-2022_0389-0423-0001

Commenter Type: Private Citizen

Commenter: Michael Marure

Organization:

Excerpt Text:

Over 5 million people live near the airports where air pollution may affect them.

Comment Number: EPA-HQ-OAR-2022_0389-0283-0001

Commenter Type: Private Citizen

Commenter: Mark Barone

Organization:

Excerpt Text:

Lead in gasoline has been ban for years! Lets ban it in airplane gas too! Aviation gas is the largest source of lead emissions in the country. Lead exposure is responsible for serious illness including cancer and cardiovascular disease. According to the EPA, Millions of people live near airports where Lead Gas is hurting them, [FL TEXT REMOVED] Sincerely, Mark Barone Salt Lake City, UT 84105

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-008-0001

Commenter Type: Private Citizen

Commenter: Dorinne Tye

Organization:

Excerpt Text:

In a quick review of the origins of the Environmental Protection Agency, it reflects a 60 years ago public outcry lead to the beginning of the EPA, 50 years ago, it would seem it all began over an airborne toxin killing birds and food chains and injuring human health plus an unusual pollution related fire, invisible large environmental impacts stemming from fossil fuel pollution. Over half of the initial goals of the EPA were to address lead and fossil fuels. Within 25 years all forms of leaded fuel was banned except aircraft fuel. 50 years later this poison has only spread, grown and remains concentrated over U.S. citizens and soils. I live in the Pacific Northwest, thus my jaw drops at the irony of EPA's foot dragging amidst public outcry about the airborne leaded toxins millions are exposed to 60 years later distributed by an exempted massive fossil fuel pollution teetering near record highs, extinction rates on par with dinosaur die off, and hugely increased wildlife labeling of critical concern, increased by increasing violence, human life expectancy reductions, mental illness crisis and megafires and here we are telling the EPA we are suffering and begging you to protect us from this known airborne neurotoxin believed to be connected to the fall of Rome and banned in all other fuels resulting in a steady reduction of violent crime. Sorry I skipped over, this known airborne telling the EPA we are suffering and begging you to protect us from this known airborne neurotoxin believed to be connected to the fall of Rome, and banned in all other fuels resulting in a steady reduction of violent crime. Some species rebounded and IQ increased until aviation

picked up business to increase lead pollution and transportation fuels to the levels big oil are more accustomed to. EPA was established to prevent this very thing not to be the roadblock. I understand the egregious error was in place before most of you now in the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0438-0001

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. My child was impacted by lead poisoning due to exposure from a neighbor's improperly stripping paint from their home. Lead exposure, particularly during childhood, can result in devastating impacts on health, as I am personally aware.

Comment Number: EPA-HQ-OAR-2022_0389-0438-0004

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Please, with urgency, finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0439-0001

Commenter Type: Private Citizen

Commenter: Dani Gioseffi

Organization:

Excerpt Text:

The usage of leaded aviation fuel is criminal! We are writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0440-0001

Commenter Type: Private Citizen

Commenter: Margaret Barrett

Organization:

Excerpt Text:

Leaded gasoline is every bit as dangerous now as it was when it was banned from most cars 25 years ago. That is why I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and then quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas".

Comment Number: EPA-HQ-OAR-2022_0389-0407-0001

Commenter Type: Private Citizen

Commenter: David Pedersen
Organization:

Excerpt Text:

I concur with the Administrator's judgment that airborne lead (in this case from reciprocating piston engines used for aviation purposes) causes and contributes to air pollution that may be reasonably anticipated to endanger public health and welfare.

Comment Number: EPA-HQ-OAR-2022_0389-0312-0002

Commenter Type: Private Citizen

Commenter: Kara Masters

Organization:

Excerpt Text:

Over 5 million people, more than 360,000 of them children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0345-0003

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, results in devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0345-0004

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0002

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

According to the EPA, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the 20,000 airports where piston-engine aircraft operate. Lead exposure, especially during childhood, can have devastating impacts on health, and [FL TEXT REMOVED] Lead exposure is also responsible for leading to serious illnesses in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0409-0001

Commenter Type: Private Citizen

Commenter: Catherine Carter

Organization:

Excerpt Text:

I know you hear from me a lot (or at least your staff does), and I'm sorry about that. But I'm writing today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I know you're already aware that lead exposure, particularly during childhood, can result in devastating impacts on health and is responsible for serious illness in adults, including cancer and cardiovascular disease. According to the EPA's own data, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. [FL TEXT REMOVED] This needs to change right now. [FL TEXT REMOVED] Sincerely, Catherine Carter Cullowhee, NC 28723

Comment Number: EPA-HQ-OAR-2022_0389-0413-0001

Commenter Type: Private Citizen

Commenter: Roberta Maynard

Organization:

Excerpt Text:

[FL TEXT REMOVED] More than 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Sincerely, Roberta Maynard Ashburn, VA 20147

Comment Number: EPA-HQ-OAR-2022_0389-0438-0002

Commenter Type: Private Citizen

Commenter: Heather Saul

Organization:

Excerpt Text:

Over 5 million people live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0435-0003

Commenter Type: Private Citizen

Commenter: Diane Fails

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, can result in devastating impacts on health, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0445-0002

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

Over 5 million people live near at least one of the airports where piston-engine aircraft operate, according to the EPA.

Comment Number: EPA-HQ-OAR-2022_0389-0498-0002

Commenter Type: Private Citizen

Commenter: Sharon Enzi

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, can have devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0498-0003

Commenter Type: Private Citizen

Commenter: Sharon Enzi

Organization:

Excerpt Text:

According to the EPA, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0555-0001

Commenter Type: Private Citizen

Commenter: Victoria Grayland

Organization:

Excerpt Text:

I used to live on Beacon Hill in Seattle in the SeaTac Airport flight path. The air was horrendous there. [FL TEXT REMOVED] Sincerely, Victoria Grayland Kenmore, WA 98028

Comment Number: EPA-HQ-OAR-2022_0389-0578-0001

Commenter Type: Private Citizen

Commenter: Gloriana Casey

Organization:

Excerpt Text:

*****AVIATION gasoline = LEAD in the body, especially of kids. what is wrong with you that this still hasn't been remedied? *****

Comment Number: EPA-HQ-OAR-2022_0389-0611-0002

Commenter Type: Private Citizen

Commenter: Pamela Holley-Wilcox
Organization:

Excerpt Text:

Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0614-0001
Commenter Type: Private Citizen
Commenter: Leslie Sand
Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health, including with cancer.

Comment Number: EPA-HQ-OAR-2022_0389-0615-0001
Commenter Type: Private Citizen
Commenter: Joan Donovan
Organization:

Excerpt Text:

Please I urge you to finalize an endangerment finding for leaded aviation gasoline (avgas) and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure, can result in devastating impacts on health. Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease!! Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0320-0001
Commenter Type: Private Citizen
Commenter: Elaine Friedrich
Organization:

Excerpt Text:

It has also been noted that crime rates decreased when we removed lead from auto etc gasoline....

Comment Number: EPA-HQ-OAR-2022_0389-0687-0002
Commenter Type: Private Citizen
Commenter: Christopher Lish
Organization:

Excerpt Text:

Over five million people, including more than 360,000 children under the age of five, live near at least one of the airports where piston-engine aircraft operate, according to the Environmental Protection Agency.

Comment Number: EPA-HQ-OAR-2022_0389-0441-0002

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

I URGE you to L 1. finalize an endangerment finding for leaded aviation gasoline and 2. quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure is no joke. Our kids are especially at risk. Our elderly and health-compromised are too. And we healthy adults can develop ailments because of it. There's tons of evidence showing the danger of lead to human health. Lead exposure is responsible for serious illness in adults that include cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0441-0005

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible!

Comment Number: EPA-HQ-OAR-2022_0389-0445-0001

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0445-0003

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

Our communities across the country are breathing in lead! Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to ban leaded avgas NOW.

Comment Number: EPA-HQ-OAR-2022_0389-0447-0001

Commenter Type: Private Citizen

Commenter: MaryAnn and Frank Graffagnino

Organization:

Excerpt Text:

AS two caring and concerned people, my husband and I are writing to urge you to finalize an

endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0448-0001

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please quickly finalize an endangerment finding for highly toxic leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0448-0005

Commenter Type: Private Citizen

Commenter: Judy Lukasiewicz

Organization:

Excerpt Text:

Banning avgas is important and cannot wait. Each and every day that leaded gasoline is used in piston-engine aircraft, people and animals across the country are breathing in toxic lead. Leaded gasoline was correctly banned in cars and paint products 25 years ago. Unfortunately and unwisely, avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. This remains unacceptable in the USA. Please finalize this endangerment finding now, and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0433-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

I ask you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Studies have shown that children who live near airports have higher levels of lead in their blood.

Comment Number: EPA-HQ-OAR-2022_0389-0435-0001

Commenter Type: Private Citizen

Commenter: Diane Fails

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0400-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Riebschlaeger

Organization:

Excerpt Text:

Climate Change and Global Warming are impacting all of us now. For our children, the impacts will only be worse, if the trends continue. But you, on behalf of all of us, can act now to slow and even reverse the disastrous results of our own actions. Perhaps we were all ignorant or deceived by fake science and industry denial. But now Nature herself is demonstrating that Global Warming and its impacts are real. Further, that conscious human activities are worsening the natural process we call "Climate Change". We cannot let this continue, but must act as responsible adults. Therefore, I am joining thousands of Americans now writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Elizabeth Riebschlaeger Victoria, TX 77901

Comment Number: EPA-HQ-OAR-2022_0389-0402-0001

Commenter Type: Private Citizen

Commenter: Marc Fleisher

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Is it naive of me to think that, if lead is forbidden in automobile gas, it should also be forbidden in avgas? I hope not. Lead is bad for children and birds and more. The time is now to stop using it in aviation gas. Please make this endangerment ruling final.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0001

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

I did not realize that when small planes flew over my neighborhood, they were still using leaded gasoline, which was banned in most cars 25 years ago. Please finalize an endangerment finding for leaded aviation gasoline, and quickly adopt rules eliminating the use of leaded "avgas", which is the largest source of lead emissions in the nation.

Comment Number: EPA-HQ-OAR-2022_0389-0405-0004

Commenter Type: Private Citizen

Commenter: Linda Lobik

Organization:

Excerpt Text:

Banning avgas can't wait. [FL TEXT REMOVED] Please finalize this endangerment finding as soon as possible, and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0407-0005

Commenter Type: Private Citizen

Commenter: David Pedersen

Organization:

Excerpt Text:

As discussed in the text of the proposed rule, the Administrator has received numerous petitions seeking an endangerment finding for leaded aviation fuel and its emissions (dating back to 2003, if not even earlier). I concur with other commenters that it is concerning that it has taken this long for this proposed endangerment finding to be published, especially in light of the empirical and more recently statistical evidence of the dangers of lead. However, I am grateful that the Administrator has now made this proposed finding. I urge the Administrator to finalize this proposed rule and promulgate emissions / fuel standards that will hopefully rid our skies, and everything below them, of airborne lead as soon as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0409-0001

Commenter Type: Private Citizen

Commenter: Catherine Carter

Organization:

Excerpt Text:

I know you hear from me a lot (or at least your staff does), and I'm sorry about that. But I'm writing today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I know you're already aware that lead exposure, particularly during childhood, can result in devastating impacts on health and is responsible for serious illness in adults, including cancer and cardiovascular disease. According to the EPA's own data, over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate. [FL TEXT REMOVED] This needs to change right now. [FL TEXT REMOVED] Sincerely, Catherine Carter Cullowhee, NC 28723

Comment Number: EPA-HQ-OAR-2022_0389-0414-0001

Commenter Type: Private Citizen

Commenter: Elizabeth Sexton

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. The amount of lead pollution from this source is primary. Please ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0426-0001

Commenter Type: Private Citizen

Commenter: Alma Bailon

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

EPA, please finalize your finding that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0427-0001

Commenter Type: Private Citizen

Commenter: Hortencia Laguna

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

Studies show that lead poses a significant health risk to the community, yet nearly 170,000 piston-engine aircraft use leaded fuel nationwide.

Protecting children's health from environmental hazards is central to EPA's mission.

Please finalize your finding that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0429-0001

Commenter Type: Private Citizen

Commenter: Rosaura Vivanco

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

EPA needs to urgently protect our communities and regulate leaded jet fuel. Please finalize your findings that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0430-0001

Commenter Type: Private Citizen

Commenter: Patricia Vazquez

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I urge you to conclude your finding that lead emissions from covered aircraft engines using leaded fuel endanger human health.

Comment Number: EPA-HQ-OAR-2022_0389-0378-0001

Commenter Type: Private Citizen

Commenter: Marie Schultz

Organization:

Excerpt Text:

[FL TEXT REMOVED] I urge EPA to make the finding to protect public and move all aviation beyond

leaded fuels We need to get the lead out -period! The lead pipes in the city of Milwaukee are a disgrace. Poisoning children. Leaded gas just should not be allowed-period! Retrofit the planes so they can use regular fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0379-0001

Commenter Type: Private Citizen

Commenter: Mary Junek

Organization:

Excerpt Text:

I strongly support EPA finding that lead air pollution is reasonably anticipated to endanger the public health and welfare under the Clean Air Act and that aircraft using leaded fuel cause or contribute to that pollution. [FL TEXT REMOVED] It's time to clean up our world. We know that lead is a hazard to our health and our fellow creatures' health. We need to remove the danger with any means we can.

Comment Number: EPA-HQ-OAR-2022_0389-0384-0001

Commenter Type: Private Citizen

Commenter: Jerry Hickson

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Planes burning avgas are showering lead all across our country. [FL TEXT REMOVED] Every day that leaded gasoline is used in piston-engine aircraft, people in communities across the country are breathing in lead. [FL TEXT REMOVED] This is not necessary. Plane engines can be changed so they do not need lead, just as auto engines were changed long ago. [FL TEXT REMOVED] Sincerely, Jerry Hickson Hartland, VT 05048

Comment Number: EPA-HQ-OAR-2022_0389-0386-0002

Commenter Type: Private Citizen

Commenter: Rebecca Baggett

Organization:

Excerpt Text:

I write to you as a concerned citizen and grandmother, to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. [FL TEXT REMOVED] Multiple studies have shown that children who live near airports have higher lead levels in their blood. As a mother and grandmother, this appalls me. The actions and inactions of the Trump administration have delayed progress toward environmental protections in every arena, impacting our health and the health and wellbeing of future generations. Banning avgas cannot and should not wait. [FL TEXT REMOVED] Sincerely, Rebecca Baggett Athens, GA 30605

Comment Number: EPA-HQ-OAR-2022_0389-0387-0001

Commenter Type: Private Citizen

Commenter: Susan Stafford

Organization:

Excerpt Text:

As a mother, I'm asking you to make a finding that leaded aviation gasoline is an endangerment to the health of our children and to the rest of the population. Recently we've seen chocolate manufacturers sued for not warning the public of veer small concentrations of lead in dark chocolate. Yet leaded aviation gasoline, or "avgas", is the largest source of lead emissions in the country. Rules should be adopted eliminating the use of "avgas". [FL TEXT REMOVED] Sincerely, Susan Stafford Tallahassee, FL 32308

Comment Number: EPA-HQ-OAR-2022_0389-0393-0001

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Todd Gutmann Cupertino, CA 95014

Comment Number: EPA-HQ-OAR-2022_0389-0396-0001

Commenter Type: Private Citizen

Commenter: Ellen Henry

Organization:

Excerpt Text:

Please quickly finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. The major toxicity of lead, particularly during childhood, is well-known and has been for decades. There is no excuse for still allowing its use in something as prevalent as aviation fuel. [FL TEXT REMOVED] Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are breathing in lead and risking their healthy future. Leaded gasoline was banned in most cars 25 years ago, so why is it still permitted in aviation?! [FL TEXT REMOVED] Sincerely, Ellen Henry Pittsford, NY 14534

Comment Number: EPA-HQ-OAR-2022_0389-0397-0001

Commenter Type: Private Citizen

Commenter: Kathryn Wild

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded aviation gasoline "avgas" is the largest source of lead emissions in the country. Please finalize the endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0280-0001

Commenter Type: Private Citizen

Commenter: Bill Nierstedt

Organization:

Excerpt Text:

I am writing as a voting American citizen who has been involved in environmental issues my entire adult life. In this particular issue, I thought that our society had outlawed the sale of leaded gas years ago. I was extremely disappointed to learn that we still sell leaded gasoline for airplanes! WHY? When we know that it is no good for our environment??? I therefore urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Bill Nierstedt Garwood, NJ 07027

Comment Number: EPA-HQ-OAR-2022_0389-0281-0001

Commenter Type: Private Citizen

Commenter: Terry Brownfield

Organization:

Excerpt Text:

Leaded gas was banned 25 years ago, so we are WAY behind in similarly banning it in avgas!! This is crazy - the health implications were known 30 years ago!! Please, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Please do this NOW. I don't need to remind you of the dangers and illness caused by lead exposure; you know them. We need you to act on this ethical issue for our children's future now. [FL TEXT REMOVED] Sincerely, Terry Brownfield Larkspur, CO 80118

Comment Number: EPA-HQ-OAR-2022_0389-0285-0001

Commenter Type: Private Citizen

Commenter: Jim Long

Organization:

Excerpt Text:

I have personal experience observing piston-driven aircraft habitually circulating above an elementary school and middle school in Bryans Road, MD, only 19 miles from EPA headquarters. You can see 12 second video clip here: <https://youtube.com/shorts/ZUQ4VGEj0Jk> Therefore, I write to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Jim Long Ithaca, NY 14850

Comment Number: EPA-HQ-OAR-2022_0389-0286-0001

Commenter Type: Private Citizen

Commenter: Kent Borges

Organization:

Excerpt Text:

As a constituent from Colorado Springs, CO (80904) concerned about the devastating impacts of climate change we see all around us, I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As we have long known, [FL TEXT REMOVED] Currently [FL TEXT REMOVED] I implore the EPA to finalize this endangerment finding as soon as possible and work

with the Federal Aviation Administration to quickly ban leaded avgas. Thank you for your consideration of this matter of the utmost importance and urgency for the health of millions of Americans. Sincerely,
Kent Borges Colorado Springs, CO 80904

Comment Number: EPA-HQ-OAR-2022_0389-0288-0001

Commenter Type: Private Citizen

Commenter: Alexander Oehrlein

Organization:

Excerpt Text:

I was not even aware that leaded fuel in aviation is still in use. Hadn't that already become common sense in the 80's and 90s that lead in gasoline should be banned? I am not blaming you for this, but since you have now the administrative power and means at hand, I am writing to urge you as a fellow air-breather to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Alexander Oehrlein Lovilia, IA 50150

Comment Number: EPA-HQ-OAR-2022_0389-0289-0001

Commenter Type: Private Citizen

Commenter: Naomi Pless

Organization:

Excerpt Text:

As a physician, I write to urge you to finalize an endangerment finding for leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0289-0006

Commenter Type: Private Citizen

Commenter: Naomi Pless

Organization:

Excerpt Text:

Banning avgas is urgent. [FL TEXT REMOVED] Although leaded gasoline was banned in most cars a quarter century ago, avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

Please work to finalize the endangerment finding as soon as possible and then urge the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Naomi Pless MD Rochester, NY 14623

Comment Number: EPA-HQ-OAR-2022_0389-0290-0004

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

Delaying only begets more delays. [FL TEXT REMOVED] Please, finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Bruce Hlodnicki Indianapolis, IN 46226

Comment Number: EPA-HQ-OAR-2022_0389-0290-0007

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

I'm a physician and I insist you finalize an endangerment finding for leaded aviation gasoline then to quickly adopt new rules eliminating the use of leaded aviation gasoline, or "avgas".

Comment Number: EPA-HQ-OAR-2022_0389-0295-0001

Commenter Type: Private Citizen

Commenter: Lane Trippe

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure poses a huge health risk to all people but especially to infants and children.

Comment Number: EPA-HQ-OAR-2022_0389-0299-0003

Commenter Type: Private Citizen

Commenter: Barbara Fant

Organization:

Excerpt Text:

Please finalize the endangerment finding as soon as possible and quickly work with the Federal Aviation Administration to ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0300-0001

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

I am writing to urge you to finalize a finding of endangerment due to leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0300-0004

Commenter Type: Private Citizen

Commenter: Keigler Michele

Organization:

Excerpt Text:

EPA translation of French language comment:

The ban on avgas cannot wait. Every single day that leaded gasoline is used in piston-engine aircraft, communities across the country breathe lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft at 20,000 airports.

The time has come. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration in order to quickly ban lead avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0302-0001

Commenter Type: Private Citizen

Commenter: Debra Levinson

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0309-0003

Commenter Type: Private Citizen

Commenter: Craig Wallentine

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas in Utah and other states.

Comment Number: EPA-HQ-OAR-2022_0389-0310-0003

Commenter Type: Private Citizen

Commenter: Peter Jones

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used in nearly 170,000 piston-engine aircraft. Please finalize this endangerment finding and work with the Federal Aviation Administration to finally ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0312-0001

Commenter Type: Private Citizen

Commenter: Kara Masters

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0312-0003

Commenter Type: Private Citizen

Commenter: Kara Masters

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to ban leaded avgas as quickly as possible.

Comment Number: EPA-HQ-OAR-2022_0389-0316-0001

Commenter Type: Private Citizen

Commenter: Joyce King

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please eliminate leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I'm sure you know the dangers to all living things from lead pollution. Please finalize the endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0318-0001

Commenter Type: Private Citizen

Commenter: Laura Ziegler

Organization:

Excerpt Text:

I live in a building that's been standing since the 1830s, so I'm reminded of the hazards of lead whenever I look at the paint on my windowsill. I was born in 1958, so I know about the hazards of leaded gasoline and why it came to be banned. But until I received an alert from Earthjustice this morning, I was unaware that leaded fuel was still in use. Now that I've been put on notice I'm writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0319-0001

Commenter Type: Private Citizen

Commenter: Carol Steinhart

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country, as soon as possible. You are well aware that lead is a deadly and versatile poison. Please work with the Federal Aviation Administration to ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0321-0001

Commenter Type: Private Citizen

Commenter: John Holstein

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0322-0001

Commenter Type: Private Citizen

Commenter: Cassandra Pierson

Organization:

Excerpt Text:

I am writing to you today to ask that you step up and protect children from the devastating effects of lead. You must finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in lifelong health issues and learning disabilities. In adults, it's responsible for many diseases including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0323-0001

Commenter Type: Private Citizen

Commenter: David Bishton

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for lead in aviation gasoline and to quickly adopt rules eliminating its use. The EPA knows that [FL TEXT REMOVED] This problem is not going away. Banning lead in small aircraft aviation fuel cannot wait for some future time when political winds change. It is one of the largest sources of lead contamination in the environment. Lead was banned in most gasoline cars 25 years ago, but leaded avgas is still used today in approx. 170,000 piston-engine aircraft across 20,000 airports. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban lead in avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0001

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

Leaded aviation gasoline is an environmental hazard. I'm writing to ask that you finalize an endangerment finding for leaded aviation gasoline and that you act fast to adopt rules that eliminate the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0329-0001

Commenter Type: Private Citizen

Commenter: Deb Merchant

Organization:

Excerpt Text:

Gas guzzling must become a tragic decision of the past! We are way overdue for using our intellect to reduce emissions, improve human health, and keep our economy stable in the process. When we do the right thing for the planet and people, everyone is better off. Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] The time is now!!

Comment Number: EPA-HQ-OAR-2022_0389-0330-0001

Commenter Type: Private Citizen

Commenter: John Commerford

Organization:

Excerpt Text:

Dear Administrator Michael Regan, EPA should finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, ("avgas").

Avgas is the largest source of lead emissions in the country. Lead exposure is terribly damaging to human health. Over five million people, including more than 360,000 children under the age of 5, live near at least one of the airports where avgas is used.

Do the right thing and ban avgas as soon as practicable.

Comment Number: EPA-HQ-OAR-2022_0389-0335-0001

Commenter Type: Private Citizen

Commenter: Mary Stewart

Organization:

Excerpt Text:

Why are planes allowed to spew lead, While they are flying overhead? It's time to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline. If lead was too dangerous to be in fuel for automobiles, why is it still permitted for planes. It is known to be the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0341-0001

Commenter Type: Private Citizen

Commenter: Leslie Friedman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and quickly to adopt rules eliminating the use of leaded aviation gasoline. "Avgas", is the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0343-0001

Commenter Type: Private Citizen

Commenter: Dale Bickenbach

Organization:

Excerpt Text:

Please finalize this endangerment findings as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0345-0001

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

I am writing to urge you to finalize the endangerment finding regarding leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0001

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

And here I was thinking we'd gotten lead out of gasoline. Now I learn that airplane fuel still contains this element that's so damaging to health of exposed people, like airport workers. That source of lead emissions remains the largest in the U.S. So I urge that you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0004

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded aviation gas.

Comment Number: EPA-HQ-OAR-2022_0389-0355-0001

Commenter Type: Private Citizen

Commenter: Mike Ellison

Organization:

Excerpt Text:

I am writing to you from Vancouver, WA where we have a local airstrip located adjacent to our downtown area and a wonderful new waterfront development. These are the public squares for our city

with Farmer's markets, festivals, and other civic gatherings. as an environmental chemist, I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0001

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for toxic leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, has long been known to result in devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0004

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban deadly leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0361-0001

Commenter Type: Private Citizen

Commenter: Emily Ecker

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0365-0001

Commenter Type: Private Citizen

Commenter: L.W. Brown

Organization:

Excerpt Text:

I am urge you to finalize the endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", now the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating childhood impacts and serious illness in adults. [FL TEXT REMOVED] Children living near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Every day that leaded gasoline is used in aircraft, lead poisons people. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today at

over 20,000 airports. The need is immediate. Please finalize this finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, L.W. Brown
Bellingham, WA 98229

Comment Number: EPA-HQ-OAR-2022_0389-0367-0001

Commenter Type: Private Citizen

Commenter: Darcy Struckman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline. Lead exposure is responsible for serious illness, as you are aware. [FL TEXT REMOVED] I ask you to finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Darcy Struckman
Carmichael, CA 95608

Comment Number: EPA-HQ-OAR-2022_0389-0369-0001

Commenter Type: Private Citizen

Commenter: Andrea Matsushima

Organization:

Excerpt Text:

Thank you for acknowledging our petition. I am writing to urge you to finalize an ENDANGERMENT finding for leaded aviation gasoline or "avgas". Leaded gasoline was banned in most cars 25 years ago. Yet avgas still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Avgas is the largest source of lead emissions in the COUNTRY. Every day that leaded gasoline is used in piston-engine aircraft, we are breathing in lead. [FL TEXT REMOVED] Once an ENDANGERMENT finding is finalized, please work with the FAA to quickly adopt rules to stop the use of leaded aviation gasoline. Sincerely, andrea matsushima
Albany, CA 94706

Comment Number: EPA-HQ-OAR-2022_0389-0371-0001

Commenter Type: Private Citizen

Commenter: Daniel Davids

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, aka "avgas." We have waited much too long to ban lead from avgas. [FL TEXT REMOVED] Sincerely, Daniel Davids
Woodinville, WA 98077

Comment Number: EPA-HQ-OAR-2022_0389-0596-0001

Commenter Type: Private Citizen

Commenter: Sylvie Karlsda

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, can produce devastating impacts on health. Lead exposure

in adults can cause cancer and cardiovascular disease. IT IS MADNESS TO CONTINUE POISONING THE EARTH LIKE THIS. [FL TEXT REMOVED] We ALSO cannot assume that lead only affects humans. What does it do to the rest of life on earth? With our entire biological environment under climate threat and extinctions rising, we must do everything we can to avoid adding to the problems and destruction we are creating.

Comment Number: EPA-HQ-OAR-2022_0389-0574-0001

Commenter Type: Private Citizen

Commenter: Sherman Lewis

Organization:

Excerpt Text:

Leaded aviation gasoline damages the environment and human health. Please make a finding consistent with the science. Adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure at all ages causes serious illness, including cancer and cardiovascular disease. [FL TEXT REMOVED] Banning lead cannot wait. [FL TEXT REMOVED] Leaded gasoline was banned in most cars 25 years ago, but lead is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Sincerely, Sherman Lewis Hayward, CA 94542

Comment Number: EPA-HQ-OAR-2022_0389-0461-0002

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

Lead exposure is responsible for serious illness in adults, including cancer and cardiovascular disease!!! This is NOT what we want or need!!!

Comment Number: EPA-HQ-OAR-2022_0389-0320-0002

Commenter Type: Private Citizen

Commenter: Elaine Friedrick

Organization:

Excerpt Text:

I am a retired RN...we knew the health issues way back when but you are sitting on your hands to correct this public health issue.

Comment Number: EPA-HQ-OAR-2022_0389-0555-0001

Commenter Type: Private Citizen

Commenter: Victoria Grayland

Organization:

Excerpt Text:

I used to live on Beacon Hill in seattle in the SeaTac Airport flight path. The air was horrendous there. [FL TEXT REMOVED] Sincerely, Victoria Grayland Kenmore, WA 98028

Comment Number: EPA-HQ-OAR-2022_0389-0620-0001

Commenter Type: Private Citizen

Commenter: Mindy Rouff

Organization:

Excerpt Text:

I live in a 120 year old house so I'm very familiar with the dangers of lead. However, I didn't know about leaded aviation gas until just now. I feel angry knowing that our government isn't protecting people from this type of lead exposure

Comment Number: EPA-HQ-OAR-2022_0389-0345-0003

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Lead exposure, particularly during childhood, results in devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0345-0004

Commenter Type: Private Citizen

Commenter: Meredith OConnor

Organization:

Excerpt Text:

Over 5 million people, including more than 360,000 children under the age of 5, live near at least one of the airports where piston-engine aircraft operate.

Comment Number: EPA-HQ-OAR-2022_0389-0568-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Roger Martin

Organization:

Excerpt Text:

I have a commercial/multi-engine/instrument rating and am a retired Air Force pilot. I have many hours in piston-powered planes, too. I also have a science degree and spent part of my post-Air Force career as a systems engineer in an aerospace company. We don't need leaded fuel in planes if we don't in cars.

Comment Number: EPA-HQ-OAR-2022_0389-0498-0001

Commenter Type: Private Citizen

Commenter: Sharon Enzi

Organization:

Excerpt Text:

I am in disbelief that the EPA has dragged its feet for years on the danger of leaded aviation gas. Really? Why would any rational person believe that leaded gas in cars is a danger to human health but leaded gas

in planes is perfectly safe? Would the EPA's inaction have anything to do with the location of most airports with planes using leaded gas-I.e., in communities of color? I urge you to finalize an endangerment finding for leaded aviation gasoline, and I press you to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0536-0001

Commenter Type: Private Citizen

Commenter: Elaine Mayer

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country. Lead exposure can result in devastating impacts on health. Over 5 million people live near at least one of the airports where piston-engine aircraft operate, according to the EPA. [FL TEXT REMOVED] Sincerely, Elaine Mayer
Minneapolis, MN 55447

Comment Number: EPA-HQ-OAR-2022_0389-0537-0001

Commenter Type: Private Citizen

Commenter: James Boone

Organization:

Excerpt Text:

This issue is important to me as I am sure it is to you as well. Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas". This is the largest source of lead emissions in the country. [FL TEXT REMOVED] The time has come! [FL TEXT REMOVED] Thank you for considering my comments. Sincerely, James Boone
Sincerely, James Boone Portland, OR 97229

Comment Number: EPA-HQ-OAR-2022_0389-0549-0001

Commenter Type: Private Citizen

Commenter: Margaret Barrett

Organization:

Excerpt Text:

No doubt you already know how dangerous lead emissions are, especially to children. And no doubt you already know that aviation gasoline, or "avgas", is the largest source of lead emissions in the country. I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of it. [FL TEXT REMOVED] Sincerely, Margaret Barrett Malvern, PA 19355

Comment Number: EPA-HQ-OAR-2022_0389-0557-0001

Commenter Type: Private Citizen

Commenter: Carol Landis

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and then quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Even worse, [FL TEXT REMOVED] Sincerely, Carol Landis Johnson City, TN 37601

Comment Number: EPA-HQ-OAR-2022_0389-0560-0001

Commenter Type: Private Citizen

Commenter: Sheri Kuticka

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can impact health. Lead exposure is responsible for illness in adults, including cancer and cardiovascular disease. [FL TEXT REMOVED] Children who live near airports have higher levels of lead in their blood.. [FL TEXT REMOVED] Please finalize this endangerment finding and ban leaded avgas. Sincerely, Sheri Kuticka Concord, CA 94518

Comment Number: EPA-HQ-OAR-2022_0389-0575-0001

Commenter Type: Private Citizen

Commenter: Ruth Fruland

Organization:

Excerpt Text:

Lead is poison. Finalize the endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the USA. Multiple studies have shown that children who live near airports have higher levels of lead in their blood and [FL TEXT REMOVED] Finalize this endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, Ruth Fruland Seattle, WA 98115

Comment Number: EPA-HQ-OAR-2022_0389-0594-0001

Commenter Type: Private Citizen

Commenter: Lisa Mills

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Leaded gasoline was rightly banned in most cars 25 years ago. Why is avgas is still allowed in aviation? [FL TEXT REMOVED] As you know, [FL TEXT REMOVED] We should not allow this to continue! I urge you to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0602-0001

Commenter Type: Private Citizen

Commenter: Den Mark Wichar

Organization:

Excerpt Text:

I urge you to finalize endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0001

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for toxic leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. Lead exposure, particularly during childhood, has long been known to result in devastating impacts on health.

Comment Number: EPA-HQ-OAR-2022_0389-0365-0001

Commenter Type: Private Citizen

Commenter: L.W. Brown

Organization:

Excerpt Text:

I am urge you to finalize the endangerment finding for leaded aviation gasoline, and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", now the largest source of lead emissions in the country. Lead exposure, particularly during childhood, can result in devastating childhood impacts and serious illness in adults. [FL TEXT REMOVED] Children living near airports have higher levels of lead in their blood. [FL TEXT REMOVED] Every day that leaded gasoline is used in aircraft, lead poisons people. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today at over 20,000 airports. The need is immediate. Please finalize this finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Sincerely, L.W. Brown
Bellingham, WA 98229

Comment Number: EPA-HQ-OAR-2022_0389-0369-0001

Commenter Type: Private Citizen

Commenter: Andrea Matsushima

Organization:

Excerpt Text:

Thank you for acknowledging our petition. I am writing to urge you to finalize an ENDANGERMENT finding for leaded aviation gasoline or "avgas". Leaded gasoline was banned in most cars 25 years ago. Yet avgas still used today in nearly 170,000 piston-engine aircraft across 20,000 airports. Avgas is the largest source of lead emissions in the COUNTRY. Every day that leaded gasoline is used in piston-engine aircraft, we are breathing in lead. [FL TEXT REMOVED] Once an ENDANGERMENT finding is finalized, please work with the FAA to quickly adopt rules to stop the use of leaded aviation gasoline. Sincerely, andrea matsushima Albany, CA 94706

Comment Number: EPA-HQ-OAR-2022_0389-0393-0001

Commenter Type: Private Citizen

Commenter: Todd Gutmann

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Todd Gutmann Cupertino, CA 95014

Comment Number: EPA-HQ-OAR-2022_0389-0397-0001

Commenter Type: Private Citizen

Commenter: Kathryn Wild

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Leaded aviation gasoline "avgas" is the largest source of lead emissions in the country. Please finalize the endangerment finding and work with the Federal Aviation Administration to quickly ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0439-0001

Commenter Type: Private Citizen

Commenter: Dani Gioseffi

Organization:

Excerpt Text:

The usage of leaded aviation fuel is criminal! We are writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0445-0001

Commenter Type: Private Citizen

Commenter: Ellen Isaly

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0447-0001

Commenter Type: Private Citizen

Commenter: MaryAnn and Frank Graffagnino

Organization:

Excerpt Text:

AS two caring and concerned people, my husband and I are writing to urge you to finalize an

endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0454-0001

Commenter Type: Private Citizen

Commenter: Irene Alexakos

Organization:

Excerpt Text:

Dear Administrator Michael Regan, My family would like to see you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of avgas, the largest source of lead emissions in the country. It's time to do this. It's the moral and right thing to do.

Comment Number: EPA-HQ-OAR-2022_0389-0461-0001

Commenter Type: Private Citizen

Commenter: Jeffrey DeCristofaro

Organization:

Excerpt Text:

I am writing to DEMAND you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0329-0001

Commenter Type: Private Citizen

Commenter: Deb Merchant

Organization:

Excerpt Text:

Gas guzzling must become a tragic decision of the past! We are way overdue for using our intellect to reduce emissions, improve human health, and keep our economy stable in the process. When we do the right thing for the planet and people, everyone is better off. Please finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] The time is now!!

Comment Number: EPA-HQ-OAR-2022_0389-0341-0001

Commenter Type: Private Citizen

Commenter: Leslie Friedman

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and quickly to adopt rules eliminating the use of leaded aviation gasoline. "Avgas", is the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0347-0001

Commenter Type: Private Citizen

Commenter: Christopher Hamilton

Organization:

Excerpt Text:

And here I was thinking we'd gotten lead out of gasoline. Now I learn that airplane fuel still contains this element that's so damaging to health of exposed people, like airport workers. That source of lead emissions remains the largest in the U.S. So I urge that you finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022_0389-0286-0001

Commenter Type: Private Citizen

Commenter: Kent Borges

Organization:

Excerpt Text:

As a constituent from Colorado Springs, CO (80904) concerned about the devastating impacts of climate change we see all around us, I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As we have long known, [FL TEXT REMOVED] Currently [FL TEXT REMOVED] I implore the EPA to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Thank you for your consideration of this matter of the utmost importance and urgency for the health of millions of Americans. Sincerely, Kent Borges Colorado Springs, CO 80904

Comment Number: EPA-HQ-OAR-2022_0389-0286-0001

Commenter Type: Private Citizen

Commenter: Kent Borges

Organization:

Excerpt Text:

As a constituent from Colorado Springs, CO (80904) concerned about the devastating impacts of climate change we see all around us, I strongly urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. As we have long known, [FL TEXT REMOVED] Currently [FL TEXT REMOVED] I implore the EPA to finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded avgas. Thank you for your consideration of this matter of the utmost importance and urgency for the health of millions of Americans. Sincerely, Kent Borges Colorado Springs, CO 80904

Comment Number: EPA-HQ-OAR-2022_0389-0280-0001

Commenter Type: Private Citizen

Commenter: Bill Nierstedt

Organization:

Excerpt Text:

I am writing as a voting American citizen who has been involved in environmental issues my entire adult

life. In this particular issue, I thought that our society had outlawed the sale of leaded gas years ago. I was extremely disappointed to learn that we still sell leaded gasoline for airplanes! WHY? When we know that it is no good for our environment?? I therefore urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Bill Nierstedt Garwood, NJ 07027

Comment Number: EPA-HQ-OAR-2022_0389-0288-0001

Commenter Type: Private Citizen

Commenter: Alexander Oehrlein

Organization:

Excerpt Text:

I was not even aware that leaded fuel in aviation is still in use. Hadn't that already become common sense in the 80's and 90s that lead in gasoline should be banned? I am not blaming you for this, but since you have now the administrative power and means at hand, I am writing to urge you as a fellow air-breather to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. [FL TEXT REMOVED] Sincerely, Alexander Oehrlein Lovilia, IA 50150

Comment Number: EPA-HQ-OAR-2022_0389-0289-0002

Commenter Type: Private Citizen

Commenter: Naomi Pless

Organization:

Excerpt Text:

Following that I ask that you quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the United States.

Comment Number: EPA-HQ-OAR-2022_0389-0290-0008

Commenter Type: Private Citizen

Commenter: Bruce Hlodnicki

Organization:

Excerpt Text:

It is currently the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0319-0001

Commenter Type: Private Citizen

Commenter: Carol Steinhart

Organization:

Excerpt Text:

Dear Administrator Michael Regan, Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, the largest source of lead emissions in the country, as soon as possible. You are well aware that lead is a deadly and versatile poison. Please work with the Federal Aviation Administration to ban leaded avgas.

Comment Number: EPA-HQ-OAR-2022_0389-0432-0001

Commenter Type: Private Citizen

Commenter: Mimi Sandeen

Organization:

Excerpt Text:

Personal note: Stopping the use of leaded aviation gasoline is just plain common sense. And why has the aviation industry been given a pass, and a different standard, than automobiles, when the result of using leaded gasoline is the same in either circumstance??? By your own estimate, emissions from these airplanes account for about 70% of lead released into the atmosphere. And they're being allowed to use it??? That doesn't make sense at all! So, I'm writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0357-0003

Commenter Type: Private Citizen

Commenter: Kate Considine

Organization:

Excerpt Text:

Banning avgas certainly cannot wait. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are forced to breathe in lead. Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports, sounds like a sweet deal for aviation, not so much for neighborhoods.

Comment Number: EPA-HQ-OAR-2022_0389-0757-0001

Commenter Type: Private Citizen

Commenter: Brandon Bowersox-Johnson

Organization:

Excerpt Text:

I want my son and his generation to grow up with clean air and water. BUT in my state, 8 of the top 10 lead pollution sources are airports. Leaded avgas has a drop-in replacement, and the EPA needs to push even harder to accelerate the switch to unleaded aviation fuels. Do it for my son and all our children everywhere. Please finalize the endangerment finding for leaded aviation gasoline and accelerate your time-table to adopt rules eliminating the use of leaded aviation gasoline, or "avgas". It's the largest source of lead emissions in the country! No level of lead is safe for children and humans.

Comment Number: EPA-HQ-OAR-2022_0389-0390-0001

Commenter Type: Private Citizen

Commenter: Wendy Gordon

Organization:

Excerpt Text:

Who even knew avgas was a "thing"??? Of the thousands (millions?) of environmental issues across our world, most of which most of us don't even know about, to find that aviation fuel still has lead in it??? We did something about this in auto fuel YEARS AGO. To now find out it is raining down upon us from

above and even more importantly concentrated near airports, which are traditionally near communities of color? [FL TEXT REMOVED] Sincerely, Wendy Gordon Lambertville, NJ 08530

Comment Number: EPA-HQ-OAR-2022_0389-0660-0003

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

There is no excuse for a lack of action or delay on immediately implementing these changes. No further study, no air testing, no additional distractions will change the fact that lead is fundamentally hurtful to the health of the environment and everyone living in it, and every single moment of delay is just thousands and thousands of pounds being breathed-in and accumulating towards catastrophic health damage to every single soul that ingests it. No more excuses, no more delays.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0002

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

I have commented previously on this serious health problem that can be effectively addressed if the EPA steps up.

Comment Number: EPA-HQ-OAR-2022_0389-0435-0001

Commenter Type: Private Citizen

Commenter: Diane Fails

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0734-0003

Commenter Type: Private Citizen

Commenter: Nastassia Barber

Organization:

Excerpt Text:

Avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports.

Comment Number: EPA-HQ-OAR-2022_0389-0762-0001

Commenter Type: Private Citizen

Commenter: Taylor Elop

Organization:

Excerpt Text:

This rule illustrates a step in the right direction towards creating a cleaner and safer environment for everyone and their families. Lead is EXTREMELY toxic to humans, wildlife, and the general environment; there is no reason why we should not have proper regulations that safeguard individuals from substances proven to be detrimental to our health.

Comment Number: EPA-HQ-OAR-2022-0389-0164-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: Airport Impact Relief, Inc.

Excerpt Text:

Why are we even discussing this now? The information and research is out there with larger planes leaded paint, etc. Thus is long overdue, sorry. EPA, do your job!

Comment Number: EPA-HQ-OAR-2022_0389-0498-0004

Commenter Type: Private Citizen

Commenter: Sharon Enzi

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports!

Comment Number: EPA-HQ-OAR-2022_0389-0760-0001

Commenter Type: Private Citizen

Commenter: Marilyn Miller

Organization:

Excerpt Text:

I just learned about this so i am writing to urge you to finalize an endangerment finding for leaded aviation gasoline that is still being used in airplanes today, and to quickly implore you to adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0437-0001

Commenter Type: Private Citizen

Commenter: Teresa Martinez

Organization:

Excerpt Text:

EPA translation of Spanish language comment:

I would like airplanes to be removed for the sake of our children because we know they have a lot of lead

Comment Number: EPA-HQ-OAR-2022_0389-0761-0001

Commenter Type: Private Citizen

Commenter: Anne Cassebaum

Organization:

Excerpt Text:

Please make final an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country. I do not have to explain to you the toxicity of lead.

Comment Number: EPA-HQ-OAR-2022_0389-0687-0001

Commenter Type: Private Citizen

Commenter: Christopher Lish

Organization:

Excerpt Text:

I am writing to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas," the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0002

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

It is the largest source of lead emissions in the country! As we all know by now, exposure to lead can have horrible health outcomes, and this is especially true for children. Lead exposure is likewise responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0328-0004

Commenter Type: Private Citizen

Commenter: Donna Carswell

Organization:

Excerpt Text:

We must ban aviation gasoline NOW. Every day that leaded gasoline is used in piston-engine planes, children and their parents, grandparents, teachers, and ministers are breathing in lead from leaded gasoline--which was banned in most cars 25 years ago! But it is still used today in nearly 170,000 piston-engine aircraft at 20,000 airports. Please finalize this endangerment finding as soon as possible and work with the Federal Aviation Administration to quickly ban leaded aviation gasoline.

Comment Number: EPA-HQ-OAR-2022-0389-0478-0001

Commenter Type: Private Citizen

Commenter: Steven Jones

Excerpt Text:

I live near a civilian airport (Anacortes) & I am very concerned about this issue & I am angered by how long it has taken to correct this problem.

Comment Number: EPA-HQ-OAR-2022_0389-0270-0001

Commenter Type: Private Citizen

Commenter: Dell Salza

Organization:

Excerpt Text:

Please!!! There is so much in the world today that is damaging our children's health and destroying their future. I have 5 grandchildren and I've had it with people who put money above their quality of life - and everybody else's, too. [FL TEXT REMOVED] Sincerely, Dell Salza Beachwood, OH 44122

Comment Number: EPA-HQ-OAR-2022_0389-0294-0001

Commenter Type: Private Citizen

Commenter: Andria Payne

Organization:

Excerpt Text:

[FL TEXT REMOVED] It is Your job to see these actions take place, why are You dragging your feet? Don't you care about children's brain health, what if it were your child or grandchild would that inspire you to get moving? As a taxpayer I request you make a move immediately. How long does this earth have to suffer at the hands of us/You. Sincerely, Andria Payne Little River, SC 29566

Comment Number: EPA-HQ-OAR-2022_0389-0296-0001

Commenter Type: Private Citizen

Commenter: Mark Meeks

Organization:

Excerpt Text:

I urge this action as a grandfather of nine, the youngest being 3 weeks old. they all live in the Denver metropolitan area where clean air is a constant challenge. I want to see that we do all we can to protect our air quality and the health of all of our people, especially our children. This opportunity is one action that is quite accessible and promising for better air.

Comment Number: EPA-HQ-OAR-2022_0389-0721-0001

Commenter Type: Private Citizen

Commenter: Michelle Williams

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0726-0001

Commenter Type: Private Citizen

Commenter: Dwight Johnson

Organization:

Excerpt Text:

Please finalize an endangerment finding for leaded aviation gasoline and quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0730-0001

Commenter Type: Private Citizen

Commenter: Sheila Macmanus

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline --the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0733-0001

Commenter Type: Private Citizen

Commenter: Anne Kroeker

Organization:

Excerpt Text:

I am a 68 year old conservation and social advocate, writing to you today to urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country.

Comment Number: EPA-HQ-OAR-2022_0389-0335-0002

Commenter Type: Private Citizen

Commenter: Mary Stewart

Organization:

Excerpt Text:

I don't want my community polluted by the lead from Torrance Airport.

Comment Number: EPA-HQ-OAR-2022_0389-0344-0001

Commenter Type: Private Citizen

Commenter: ML Menikheim

Organization:

Excerpt Text:

Get the lead out!!!!!!!

Comment Number: EPA-HQ-OAR-2022_0389-0360-0002

Commenter Type: Private Citizen

Commenter: Craig Zarling

Organization:

Excerpt Text:

Please take this opportunity to further protect the public.

Comment Number: EPA-HQ-OAR-2022_0389-0370-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Michael Snow

Organization:

Excerpt Text:

I am a general aviation pilot and worked in the aviation industry for over 20 years before I retired. While I enjoy \$100 hamburgers and boring holes in the sky as much as the next pilot, the costs of continued use of leaded AvGas simply do not outweigh the benefits, especially at a societal level. Action is long, long overdue. So you make flying more expensive? So what? It's a small burden on a population who can most afford it. Don't let AOPA pretend they speak for all pilots. They don't.

Comment Number: EPA-HQ-OAR-2022_0389-0385-0001

Commenter Type: Private Citizen

Commenter: Charlotte Fremaux

Organization:

Excerpt Text:

This is a no-brainer that should have been done long ago. How stupid is it to know of the danger, have a way to mitigate it, and yet to do nothing? I am sick of appealing to the EPA to take the actions it clearly needs to, and yet drags its feet. [FL TEXT REMOVED] Sincerely, Charlotte Fremaux Harpers Ferry, WV 25425

Comment Number: EPA-HQ-OAR-2022_0389-0391-0001

Commenter Type: Private Citizen

Commenter: E Worthington

Organization:

Excerpt Text:

[FL TEXT REMOVED] Until recently, I thought leaded gas was gone and had been for years. I was surprised that those who know about such things do know, but don't appear to care. [FL TEXT REMOVED] We need to care about all of our children. [FL TEXT REMOVED] It appears money is involved in this. Only a substantial wealth is involved in owning airplanes. We average people were able to give up leaded gasoline for our cars with relatively short notice. Why can't those with airplanes using leaded avgas? [FL TEXT REMOVED] Do what is in the interest of our people and our environment. Sincerely, E Worthington Greencastle, PA 17225

Comment Number: EPA-HQ-OAR-2022_0389-0398-0001

Commenter Type: Private Citizen

Commenter: Evelyn Farbman
Organization:

Excerpt Text:

[FL TEXT REMOVED] According to the EPA, five million people (including more than 360,000 children under the age of five), live near at least one of the airports where piston-engine aircraft operate. [FL TEXT REMOVED] For Christmas, my son's family is flying from California to spend a week with us in Connecticut. We haven't seen them for over a year, so I'm delighted. But my delight is tempered with grief over the pollution that their flight will leave in our air, all across the country. It doesn't have to be this way. We have smart engineers who know how to fuel airplanes without this pollution. It will take some money to make the transition to cleaner flying, but it's an investment in our nation's health and our children's future. Every day that leaded gasoline is used in piston-engine aircraft, communities across the country are inhaling lead. [FL TEXT REMOVED] Now is the time to make a change. Soon it will be too late. [FL TEXT REMOVED] Sincerely, Evelyn Farbman Middletown, CT 06457

Comment Number: EPA-HQ-OAR-2022_0389-0399-0001
Commenter Type: Private Citizen
Commenter: Susan Rodriguez
Organization:

Excerpt Text:

Why are you still allowing lead fuel? We put people like you, intelligent people, to be our watch dogs. Do that. Be the watch dog for our health and well being. And the health and well being of our planet and all the beings that live on it. [FL TEXT REMOVED] Sincerely, Susan Rodriguez Scottsdale, AZ 85260

Comment Number: EPA-HQ-OAR-2022_0389-0408-0001
Commenter Type: Private Citizen
Commenter: Jesse Reyes
Organization:

Excerpt Text:

[FL TEXT REMOVED] With the catastrophic effects of the Climate Crises underway, exacerbated by our failure thus far to significantly curb fossil fuel emissions and its effects on public health, surely we can do something to not make matters worse by eliminating actual toxins in the pollution. [FL TEXT REMOVED] Sincerely, Jesse Reyes Maplewood, NJ 07040

Comment Number: EPA-HQ-OAR-2022_0389-0411-0001
Commenter Type: Private Citizen
Commenter: Marcelo Bermann
Organization:

Excerpt Text:

as a ca lic'd painting contractor i am appalled by the irony of the regulations being enforced on led paint removal and the total disregard being given to preventing that same pollution from raining down on all the neighborhood children and their schools...nothing short of criminal is taking place here and i for one will fight to insure that all parties responsible be brought to trial for their criminal conduct, let alone win one more election!

Comment Number: EPA-HQ-OAR-2022_0389-0419-0001

Commenter Type: Private Citizen

Commenter: William Jackson

Organization:

Excerpt Text:

Sounds good!

Comment Number: EPA-HQ-OAR-2022_0389-0420-0001

Commenter Type: Private Citizen

Commenter: William Jackson

Organization:

Excerpt Text:

This is actually a fair ruling. Please enforce this in every industry.

Comment Number: EPA-HQ-OAR-2022_0389-0442-0001

Commenter Type: Private Citizen

Commenter: Joseph Swalinkavich

Organization:

Excerpt Text:

Dear EPA, I support these regulations. It is important to put regulations and such to discourage things like leaded gas(avgas) because lead is incredibly toxic to humans which can lead to health/mental problems (even if they are small decreases to the quality of one's health and mind), disabilities and even death. Thank you for working to ensure population quality is not hindered by lead poisoning.

Comment Number: EPA-HQ-OAR-2022_0389-0443-0001

Commenter Type: Private Citizen

Commenter: Barry Cheney

Organization:

Excerpt Text:

I can't believe that leaded gas is still being used! I assumed, as I would imagine almost all Americans are, that when it was removed from cars 25 years ago, that that was the end of it.

Comment Number: EPA-HQ-OAR-2022_0389-0450-0001

Commenter Type: Private Citizen

Commenter: Carol Gibson-Kish

Organization:

Excerpt Text:

After all these years, I can't believe leaded gasoline is still allowed. No, not in cars but in planes. Airplane travel is a big contributor to global warming and leaded gasoline makes it worse! Therefore, [FL TEXT REMOVED] I repeat, the largest source of lead emissions in the country. [FL TEXT REMOVED] As a

citizen but more particularly as a mother, I find this both upsetting and unacceptable. [FL TEXT REMOVED]

Comment Number: EPA-HQ-OAR-2022_0389-0455-0001

Commenter Type: Private Citizen

Commenter: Christine Hoex

Organization:

Excerpt Text:

We have to start taking total responsibility for the pollution of the planet, and the economic disparity of exposure to pollution. Sure, if you have enough money you can avoid exposure to lead and other toxic pollution. This is not right. We must do better.

Comment Number: EPA-HQ-OAR-2022_0389-0492-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Looks good

Comment Number: EPA-HQ-OAR-2022_0389-0513-0001

Commenter Type: Private Citizen

Commenter: Brenda Frey

Organization:

Excerpt Text:

[FL TEXT REMOVED] In your position you have to make this stop now because why would you allow for this to continue to happen to adults and children. Thank you for taking the time to read this letter. Sincerely, Brenda Sincerely, Brenda Frey Buffalo, NY 14224

Comment Number: EPA-HQ-OAR-2022_0389-0514-0001

Commenter Type: Private Citizen

Commenter: M. Mayer

Organization:

Excerpt Text:

[FL TEXT REMOVED] That this has been allowed to continue to this point in time is an embarrassment for the aviation industry. Lead affects your children, too. This needs to end, and you are who can do it. Choose to act for national health, rather than an agent for the spread of toxins. [FL TEXT REMOVED] Sincerely, M. Mayer Baton Rouge, LA 70802

Comment Number: EPA-HQ-OAR-2022_0389-0528-0001

Commenter Type: Private Citizen

Commenter: Ann Brodek

Organization:

Excerpt Text:

[FL TEXT REMOVED] We live near the Middleton airport and our 1 year old twin granddaughters visit us often. This information is terrifying to us. The EPA needs to have the ability to regulate these lead emissions to protect our most valuable and vulnerable babies!

Comment Number: EPA-HQ-OAR-2022_0389-0540-0001

Commenter Type: Private Citizen

Commenter: Pearl Karon

Organization:

Excerpt Text:

I'm reading a book by Richard Powers called The Overstory If you are in a position to help save the planet, this is a must read. Either way , please do this ban for your children and mine. What good is having money if the planet dies., or you get ill.[FL TEXT REMOVED] Sincerely, Pearl Karon Playa Del Rey, CA 90293

Comment Number: EPA-HQ-OAR-2022_0389-0546-0001

Commenter Type: Private Citizen

Commenter: Janet Alward

Organization:

Excerpt Text:

[FL TEXT REMOVED] What are we waiting for? [FL TEXT REMOVED] Arguably, piston-engine aircraft are the toys of the wealthy. Should we allow the welfare of all of our citizens including our most vulnerable, our children, be set aside for the pleasure or the elite class. Government protections are for all of the governed. A clean environment benefits all. [FL TEXT REMOVED] Sincerely, Janet Alward Silver Spring, MD 20910

Comment Number: EPA-HQ-OAR-2022_0389-0577-0001

Commenter Type: Private Citizen

Commenter: Diane Waller

Organization:

Excerpt Text:

Thank you for taking every step you can to address this issue. We all need to be doing whatever we can to ensure that everyone, especially children, breath the cleanest possible air we can.

Comment Number: EPA-HQ-OAR-2022_0389-0578-0002

Commenter Type: Private Citizen

Commenter: Gloriana Casey

Organization:

Excerpt Text:

*****There will be even more dead kids with failing bodies if you don't act now. Amazing, isn't it , when companies can get away with killing their own citizens so easily!*****

Comment Number: EPA-HQ-OAR-2022_0389-0589-0001

Commenter Type: Private Citizen

Commenter: Paul Davis

Organization:

Excerpt Text:

Thank you for your wise insight, valuable perspective and willingness to share this vital information. Wishing you a happy, successful and fulfilling new year.

Comment Number: EPA-HQ-OAR-2022_0389-0593-0001

Commenter Type: Private Citizen

Commenter: Liz Campbell

Organization:

Excerpt Text:

I live in Seattle, Washington. Our airport has constant and growing air traffic. There is not a 5 mins of time where you can't hear air traffic all day and night. It is horrifying the amount of lead being dropped on neighborhoods and of course low income neighborhoods and the effect on the children and all people living there. We need our EPA to protect our environment and we need this protection ASAP.

Comment Number: EPA-HQ-OAR-2022_0389-0612-0001

Commenter Type: Private Citizen

Commenter: Julia McCormick

Organization:

Excerpt Text:

The earth is in the brink. EVERYONE, especially those with power to do so, MUST do all possible to reverse the Climate Emergency. The evidence of Climate Change are all around us & worldwide. America is a major contributor to lead exposures. NOW, Republicans want to limit the powers of the EPA & cut funding AGAIN. Urgency on passing rules to protect people & the natural world is imperative before those that don't care thwart progress

Comment Number: EPA-HQ-OAR-2022_0389-0622-0001

Commenter Type: Private Citizen

Commenter: Mary Bull

Organization:

Excerpt Text:

...and Forward-thinking EPA Administration! We must get serious about banning pollutants in our environment at every turn, now that industry has run so far amuck!!! PLEASE DO EVERYTHING IN YOUR POWER to clean-up our collective mess!!! No more free-lunch for industry, especially fossil fuels!!!

Comment Number: EPA-HQ-OAR-2022_0389-0623-0001

Commenter Type: Private Citizen

Commenter: Judith Tylke
Organization:

Excerpt Text:

We are now aware of the hazards presented by the chemicals we use, and we are responsible for finding healthy solutions. I if leaded gasoline was to polluting for use at ground level how is it Not to polluting to spray into the atmosphere at higher elevations? If we want to thrive and create a society that thrives for our children we must change.

Comment Number: EPA-HQ-OAR-2022_0389-0626-0001

Commenter Type: Private Citizen

Commenter: Silvia Newhall

Organization:

Excerpt Text:

This is an absolute outrage these gases should have been banned along with fuel for cars when that was done we knew the danger of it and it is continuing on the real truth is that the government knows what it is doing to its people and you continue you don't want to stop these things because this is exactly what the government wants to hurt its own people this is most likely the cause of autism and just because it is not widely known no one knows what is going on or where it is coming from but lead is extremely dangerous for the development of children stop this unbelievable atrocity now stop poisoning your own people

Comment Number: EPA-HQ-OAR-2022_0389-0654-0001

Commenter Type: Private Citizen

Commenter: Andrew Calcagno

Organization:

Excerpt Text:

Do it now

Comment Number: EPA-HQ-OAR-2022_0389-0667-0001

Commenter Type: Private Citizen

Commenter: Michelle Louis

Organization:

Excerpt Text:

Our children deserve our best effort toward providing them a safe and healthy environment.

Comment Number: EPA-HQ-OAR-2022_0389-0673-0001

Commenter Type: Private Citizen

Commenter: Darlene Yaplee

Organization:

Excerpt Text:

The EPA is requested to end the use of leaded aviation now in support of the agency's mission to protect human health and the environment. The EPA must step up its proposal to reduce the oil and gas industry's methane pollution to ensure: Protection of our planet from the 2nd largest contributor to the climate crisis

after carbon dioxide; National efforts to reduce environmental risks by following the best available scientific information underscoring the methane emissions issue; and Creation of federal laws to protect human health and the environment. Prompt action by the FAA is long overdue. Lead was banned from automobiles over 25 years ago. The EPA must complete its endangerment finding as soon as possible, and work with the Federal Aviation Administration to swiftly phase out leaded aviation fuel once and for all.

Comment Number: EPA-HQ-OAR-2022_0389-0715-0001

Commenter Type: Private Citizen

Commenter: Mark Zuberek

Organization:

Excerpt Text:

This exercise with the comments from the general public to the EPA is an example of what our federal agencies should be doing. The lead fuel issue has been ongoing for 2030 years and has not been addressed and for that reason our children and now our seniors are feeling the effects of the leaded fuel and the fumes generated by small engines. Therefore I congratulate the EPA but it has to go much further it has to ban the leaded fuel immediately to reduce or eliminate the health dangers to our children and seniors especially. Our small town of Danvers Massachusetts has been experiencing an influx of number of trips at the Beverly airport Beverly Massachusetts which is Cole owned and located Partly in Danvers we are afraid of the health issues that may be coming to our children and to our seniors. Your efforts on this matter are appreciated however as I said earlier it needs to stop now and not wait till the engine mechanical issues are addressed because of the different fuel consistency. We deserve to escape any future lead cloud.

Comment Number: EPA-HQ-OAR-2022_0389-0718-0001

Commenter Type: Private Citizen

Commenter: John Engard

Organization:

Excerpt Text:

Why is this issue never discussed in the news and why wasn't lead in plane gas phased out at the same time as it was in cars?! Like so many societal things now, it's just not talked about or debated. Its high time to eliminate this detrimental lead pollutant since finally it has been thankfully exposed.

Comment Number: EPA-HQ-OAR-2022_0389-0722-0002

Commenter Type: Private Citizen

Commenter: Amrita Burdick

Organization:

Excerpt Text:

Children are our future and they are counting on you.

Comment Number: EPA-HQ-OAR-2022_0389-0723-0001

Commenter Type: Private Citizen

Commenter: Maureen Kilroy

Organization:

Excerpt Text:

I know it's not as simple as it sounds, but we can do it.

Comment Number: EPA-HQ-OAR-2022_0389-0728-0001

Commenter Type: Private Citizen

Commenter: Paul Meyers

Organization:

Excerpt Text:

I strongly believe that doing all we can for human health and safety, these are very critical issues. Yes, the message below that I am sending you did come to me from an organization that I support, and it's also one whose information I trust. Please know that I have read it entirely, carefully, and that I agree with it fully, - in fact, I could NOT have said it better!

Comment Number: EPA-HQ-OAR-2022_0389-0737-0001

Commenter Type: Private Citizen

Commenter: Teodora Reyes

Organization:

Excerpt Text:

Hello, my name is Teodora E. Reyes. I am a Policy Associate at Pacoima Beautiful, calling in support of this regulation.

Comment Number: EPA-HQ-OAR-2022_0389-0764-0001

Commenter Type: Private Citizen

Commenter: Melinda Holman

Organization:

Excerpt Text:

I, myself, have a metastatic cancer that may be due to environmental factors I experienced as a child. The chemical "soup" that we have created in our environment can NOT wait to be addressed. I lived near multiple small plane airports and worked the harvest in the fields nearby as a child.

Comment Number: EPA-HQ-OAR-2022_0389-0764-0002

Commenter Type: Private Citizen

Commenter: Melinda Holman

Organization:

Excerpt Text:

Migrant workers are also at risk.

Comment Number: EPA-HQ-OAR-2022-0389-0134-0002

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I am supporting the decision that the EPA has made, as I believe it to be a necessary step to allow for future regulations to be possible. This is a very reasonable finding on the EPA's behalf based on the previously known facts about this polluting agent, and by creating this finding, regulatory measures will be able to follow.

Comment Number: EPA-HQ-OAR-2022-0389-0148-0001

Commenter Type: Private Citizen

Commenter: Tom Materna

Organization:

Excerpt Text:

Finally, the EPA is taking action to get the lead out and stop hurting children and communities. Please finalize this Endangerment finding and BAN leaded Aviation gas. now there are safe alternatives i.e; swift 94UL and GAMI U100 octane that the FAA approved as a drop in fuel.

Comment Number: EPA-HQ-OAR-2022-0389-0154-0001

Commenter Type: Private Citizen

Commenter: Sarah Rosenthal

Organization:

Excerpt Text:

Would love to see the EPA continue to push the needle on this issue!

Comment Number: EPA-HQ-OAR-2022-0389-0167-0006

Commenter Type: Private Citizen

Commenter: Karl Olson

Organization:

Excerpt Text:

In closing, since solutions exist to address the concerns above, there is no reason that these policies should not be enacted. Arguments against are hollow and are a small voice that are trying to argue costs are too high. That is an incorrect position and should not be entertained. Pass these regulations on lead...but let's expand this to address the problem holistically. Further efforts are needed to mitigate the health effects of noise and tailpipe (NOx) emissions in general, especially since this has typically been an exempted source. The auto industry has made a seamless transition, there is no reason the aviation industry can not do the same.

Comment Number: EPA-HQ-OAR-2022-0389-0184-0001

Commenter Type: Private Citizen

Commenter: Piper Noll

Organization:

Excerpt Text:

As a human living on this planet, it is morally unacceptable to be damaging the very place you call home.

It is inadmissible that you still continue to pollute this earth, as I have severe health conditions that are caused by the toxins in the air.

The world is covered with airports and they often fall close to residential areas. Young or high-risk humans are hurt because of your choice not to switch to non- leaded fuel.

Please take in what you are doing to the people around you and yourself. We all share this planet. Please do better.

Comment Number: EPA-HQ-OAR-2022-0389-0187-0001

Commenter Type: Private Citizen

Commenter: Diana Smith

Organization:

Excerpt Text:

Airborne lead from gasoline exhaust is a well-known health hazard. It was eliminated from road vehicle fuel 30 years ago, yet remains the main fuel for small aircraft threatening the health of residents living near airports.

We need to eliminate lead.

Comment Number: EPA-HQ-OAR-2022-0389-0201-0001

Commenter Type: State Government

Commenter:

Organization: California Air Resources Board (CARB)

Excerpt Text:

The California Air Resources Board (CARB) applauds the proposed determination and recommends EPA take significant action to protect communities from lead exposure in California and across the country from aircraft using leaded aviation gasoline (avgas).

Comment Number: EPA-HQ-OAR-2022-0389-0204-0001

Commenter Type: Local Government

Commenter:

Organization: City of Westminster (CO) City Council (Westminster City Council)

Excerpt Text:

As stated in the Environmental Protection Agency “Action Summary”:

“Protecting children's health and reducing lead exposure are two of the EPA's top priorities. EPA has been investigating emissions of lead from aircraft operating on leaded fuel and the impact of these emissions on lead air pollution, including assessing lead concentrations in air near airports and evaluating the potentially exposed population. The majority of aircraft that operate on leaded fuel are piston- engine aircraft. These are typically small aircraft that carry 2-10 passengers. Jet aircraft used for commercial transport do not operate on a fuel containing lead.”

On October 7, 2022, EPA signed a proposed determination that lead emissions from certain aircraft cause or contribute to lead air pollution which may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act. The EPA refers to this action as the proposed “endangerment finding” which is a first step toward the application of the EPA’s and the Federal Aviation Administration’s (FAA) statutory authorities to address lead pollution from aircraft.

The Westminster City Council supports the health and well-being of Westminster residents, businesses, and visitors, as well as our neighboring communities, and the physical environment in and around the City. Toward this end, Westminster City Council is writing to support the EPA and the FAA's efforts to appropriately and promptly address lead pollution from aircraft.

Comment Number: EPA-HQ-OAR-2022-0389-0228-0001

Commenter Type: Advocacy Organization

Commenter:

Organization: National Center for Healthy Housing (NCHH)

Excerpt Text:

The National Center for Healthy Housing (NCHH) applauds this move by the Environmental Protection Agency (EPA) toward an endangerment finding and appreciates the opportunity to comment on the proposed finding.

Comment Number: EPA-HQ-OAR-2022-0389-0231-0006

Commenter Type: Advocacy Organization

Commenter:

Organization: CleanEarth4Kids.org

Excerpt Text:

This is a crisis; this is an emergency. There is no safe level of lead! Please put people before profits, please make our kids' health and future your top priority and take immediate action to Get the Lead Out.

Comment Number: EPA-HQ-OAR-2022-0389-0246-0001

Commenter Type: State Elected Official

Commenter: Lindsay Sabadosa

Organization: Lindsay N. Sabadosa, State Representative, 1st Hampshire, Commonwealth of Massachusetts

Excerpt Text:

I serve as the State Representative for the 1st Hampshire District in the Massachusetts General Court. On behalf of my district, I want to express my gratitude for the EPA's wide range of work in protecting every community from health risks and preserving our natural environment for future generations. In particular, I want to speak in support of the Agency's ongoing efforts to review the possible dangers to public health from aircraft that release emissions from leaded fuel. About a mile away from the downtown of Northampton - a city in my district of about 30,000 people - lies Northampton Airport, which has provided continuously-operation commercial runway for almost one hundred years. It currently sees around seventy flights by piston aircraft take off and land each day.

The people of my district are deeply conscious of the potential damage that human activity may take on the environment, and strongly believe that each community is responsible for addressing that damage as soon as they become aware of it. We treasure the ecology of the Connecticut River Valley, and benefit from the agriculture and tourism made possible by the land preservation efforts of past generations. We applaud the EPA for its proposed determination, and stand ready to assist with the implementation of whatever regulations that the Agency and the FAA may find necessary to protect public health and safety in communities like Northampton.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-001-0001
Commenter Type: Professional Association
Commenter: Robert Olislagers
Organization: Senior Coordinator of the FAA-Industry EAGLE program

Excerpt Text:

EAGLE was formed in February of 2022 to facilitate the transition to lead free aviation fuels for piston aircraft by the end of 2030 without compromising the safe and efficient operation of the fleet and the economic strength and viability of general aviation industry. As you will hear from some of our EAGLE partners, we are united in this goal. General aviation already reduced leaded emissions from AVGAS by more than half since the late 1970s. The regulatory process initiated by the EPA today is the appropriate course for a thoughtful, orderly and safe transition to a lead-free aviation future by the end of 2030 with the full cooperation of the Federal Aviation Administration and industry, EAGLE supports and is committed to reaching this goal.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-014-0006
Commenter Type: Advocacy Organization
Commenter: Nathan Park
Organization: Earthjustice

Excerpt Text:

In the EPA's recently finalized strategy to reduce lead emission exposures, the Biden administration has prioritized a holistic approach to protecting children and communities from lead exposure and has centered environmental justice and equity in its strategy.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-029-0001
Commenter Type: Advocacy Organization
Commenter: Barbara Kanter
Organization: Quiet Collier, Inc.

Excerpt Text:

Having spent most of my adult life in rustbelt cities and very familiar with the flaking lead paint issue, I was shocked to hear that nobody -- everybody here in Naples was in denial about the dangers of lead. Until I -- I didn't even know that there was lead, like everybody else here, until I moved to Naples, I was unaware that there was leaded AVGAS in the fuel. But because I have been a policy analyst for the past last 50 years, I am 69, it was easy for me to understand how and why this travesty still exists. I think Katy Reilly said that the only way to handle this will be at the federal level, so that makes it easier for me to explain what is happening now here in Naples. In Naples, Florida, several generations -- people have been confined to living in the River Park neighborhood. And they have been -- let's see, they were forced to live here because -- until recently Jim Crow Laws were actively enforced in Collier County. Eight years ago, a man named Byron Donalds became active in charter schools and as a member of the Mason Classical Academy schools made a sweetheart deal to Mason Classical Academy and a bankrupt building zoned as an impacted area for and prohibiting educational land use despite vocal and adamant protest from the Collier County Public Schools and the community advocates, activists, the City of Naples issued a reluctant occupancy permit for these thousands of kids to go to school next door. Both of our Congressional representatives, Mario Diaz Ballard and Donalds have relied on donations from the fuel companies and the flight schools to finance their campaigns and are doing so at the very moment.

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-029-0002

Commenter Type: Advocacy Organization

Commenter: Barbara Kanter

Organization: Quiet Collier, Inc.

Excerpt Text:

The only way to stop this and is to go the federal route. When the EPA adopts this finding environmental justice will become an achievable goal. After hitting a brick wall on the environmental issue and others just as shocking

Comment Number: EPA-HQ-OAR-2022-0389-TRANS-033-0003

Commenter Type: Private Citizen

Commenter: Elizabeth Agramont-Justiano

Organization:

Excerpt Text:

I want to call out the EPA because Congresswoman Lofgren on July 28 in the congressional hearing lead by Congressman Ro Khanna called on EPA representatives to be there and testify and you all were not there and that's unacceptable because you are supposed to -- in your title, it's Environmental Protection Agency, you are supposed to protect our communities. And you were nowhere to be found. So, I am happy with the steps you are taking now to elevate, elevate this issue but we really need you to -- to make a stand and really declare that this is a public health -- health crisis that we are experiencing now. Thank you.

Comment Number: EPA-HQ-OAR-2022_0389-0600-0001

Commenter Type: Private Citizen

Commenter: Linda Agerbak

Organization:

Excerpt Text:

I urge you to finalize an endangerment finding for leaded aviation gasoline and to quickly adopt rules eliminating the use of leaded aviation gasoline, or "avgas", the largest source of lead emissions in the country

Comment Number: EPA-HQ-OAR-2022_0389-0743-0001

Commenter Type: Private Citizen

Commenter: Scott Robinson

Organization:

Excerpt Text:

Have not the knowledge of the last 25 years even registered at the levels that we have inhaled. Once the information on the damage any product can and will cause, should be listed hazardous and taken off the market like PFAS a hundred years, lead like everywhere in the US and most fossil fuels to name a few.

Comment Number: EPA-HQ-OAR-2022_0389-0760-0003

Commenter Type: Private Citizen

Commenter: Marilyn Miller

Organization:

Excerpt Text:

Leaded gasoline was banned in most cars 25 years ago, but avgas is still used today in nearly 170,000 piston-engine aircraft across 20,000 airports and this must be stopped now. Climate Change is doing much damage every day to the people, we don't need airports with piston engines in operation to spread lead into the atmosphere also.

Comment Number: EPA-HQ-OAR-2022_0389-0441-0004

Commenter Type: Private Citizen

Commenter: Nancy Campbell

Organization:

Excerpt Text:

Are we seriously going to continue putting their lives and health at risk?

Comment Number: EPA-HQ-OAR-2022_0389-0311-0001

Commenter Type: Private Citizen

Commenter: Michael Scott

Organization:

Excerpt Text:

Lead exposure is also responsible for serious illness in adults, including cancer and cardiovascular disease.

Comment Number: EPA-HQ-OAR-2022_0389-0753-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

We know the harmful effects of lead already! To continue to allow it to poison the people is criminal. We all know better, if you don't, you should have your own levels tested. It is contributing to the devolution and eventual extinction of our species.

Comment Number: EPA-HQ-OAR-2022_0389-0754-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The medical and public health facts about lead have been clear for decades. Lead was removed from motor fuel long ago because of its well-established adverse health consequences. It should be obvious that lead in AvGas has the same health consequences as lead in motor fuel and an EPA finding to this effect is long overdue. There is no justification for any further delay.

Comment Number: EPA-HQ-OAR-2022-0389-0220-0001

Commenter Type: Private Citizen

Commenter:

Organization: Citizen's Against Gillespie's Expansion Low Flying Aircraft

Excerpt Text:

To Whom it May Concern, I support the proposed finding that Lead Emission from aircraft engines is a Danger to Public Health which would include citizens, workers and children within airports influence aera of 3 miles. The attached picture shows, by the skull and crossbones on the tail, that at least one aircraft owner knows his aircraft is using toxic av/gas. Please expedite this process as an emergency classification. Thank You.

Comment Number: EPA-HQ-OAR-2022_0389-0327-0001

Commenter Type: Private Citizen

Commenter: Timothy Bardell

Organization:

Excerpt Text:

I remember when the oil and auto industries claimed that unleaded gas would cause engines to fail and cost consumers millions. Yet somehow the oil companies managed to reformulate gas, and auto companies modified their engine designs. It just cost them some profits - temporarily.

Comment Number: EPA-HQ-OAR-2022_0389-0308-0002

Commenter Type: Private Citizen

Commenter: Molly Niven

Organization:

Excerpt Text:

Thank you for caring about the health of all of us

Comment Number: EPA-HQ-OAR-2022_0389-0627-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

The abuse, negligence and greed that is the aviation industry is out of control. ANCA was one of the the biggest mistakes an inept Congress made, and the toxic pollution that sees NO end is only one example of the disgusting corruption that feeds corporate giants. There is no incentive for airlines and aviation industries to invest in reducing their obnoxious carbon footprint. In this day and age, we should be leaps and bounds from where we are and IF Congress MANDATED change and REFUSED to allow an increase in air operations until manufacturers reduced the toxic output of aircraft, THEN you would see change and action. The EPA must act now as it is an absurd embarrassment that meaningful action has occurred to date. Hobbyists, while on JOYRIDES in their horrifically noise polluting piston planes are SPEWING lead down upon our food source, our water sources, wildlife vegetation and directly into our home gardens, pools, yards, school yards ... all of which makes it way indoors and onto our tables, beds, and clothes. The same is true from all the helicopter ABUSE, especially the NON-essential aircraft! There is NO safe lead exposure. The EPA knows that! WHY are you still permitting leaded fuel??!!

Comment Number: EPA-HQ-OAR-2022_0389-0389-0001

Commenter Type: Private Citizen

Commenter: Kerstin Milauskas

Organization:

Excerpt Text:

Dear Administrator Michael Regan, This seems to be an obvious step! The cost of implementing this action can be used by the industry as too great and detrimental to their economic sustainability. However we all realize that failure to address these issues will result in greater occurrences of catastrophic climate changes. Humanity is counting on the actions of its leaders.

Comment Number: EPA-HQ-OAR-2022_0389-0559-0001

Commenter Type: Private Citizen

Commenter: Donna Grace

Organization:

Excerpt Text:

[FL TEXT REMOVED] I don't know what planes will do, but we managed it with cars, using unleaded gas. Planes can too. [FL TEXT REMOVED] Sincerely, Donna Grace Saint Petersburg, FL 33707

Comment Number: EPA-HQ-OAR-2022-0389-0219-0007

Commenter Type: Advocacy Organization

Commenter:

Organization: Citizens Against Gillespie Expansion and Low Flying Aircraft

Excerpt Text:

Even the 2021 [Bold: "Options for Reducing Lead Emissions from Piston-Engine Aircraft"] from the National Academy of Sciences (NAS) fell far short with their recommendations for the removal of this toxic substance. There is no further testing that needs to be done. There is only one logical option for reducing leaded emissions – stop using it! [Bold: Now, not 8 years from now.]

Had the Dr. Zahran study been performed right after the Dr. Miranda study, the EPA should never have received a 2nd or a third Petition for Endangerment Finding. There would have been no need as the first one would surely have been the last.

Would the overwhelming evidence of this study have caused the National Ambient Air Quality Standard (NAAQS) to be lowered again in 2016? How would the Clean Air Scientific Advisory Committee (CASAC) have weighed the Reid-Hillview study? The EPA needs to stop pretending that they care about the federal standards for mobile sources of air pollution and their fuels through the Clean Air Act.

The GA industry needs to stop pretending that they're not poisoning our children. The FAA finally stopped pretending that they never had the unleaded fuel that all these planes could use in 2022, more than 10 years before it was brought to them for certification.

To allow the continued use of AvGas, the GA industry needed more than the mega dollars appropriated from Congress, which are our tax dollars. They needed more than the FAA's refusal to certify GAMIs G100UL unleaded fuel that was available since 2010. They needed to be sheltered from the Clean Air Act. They needed compliance and acts of omission from the EPA. And they got it. Not to reach an endangerment finding would be to continue the most abject failure of the EPA in their history.

Comment Number: EPA-HQ-OAR-2022_0389-0425-0001

Commenter Type: Private Citizen

Commenter: Steven Marure

Organization:

Excerpt Text:

We need to change the lead emissions because they are a significant health risk and even while that is known there are 170,000 piston engine planes across the United States

Section 1.2 - General opposition

Comment Number: EPA-HQ-OAR-2022_0389-0707-0001

Commenter Type: Private Citizen

Commenter: Randy Richmond

Organization:

Excerpt Text:

I stand with the opinions of www.CSAviation.org.

Comment Number: EPA-HQ-OAR-2022_0389-0569-0001

Commenter Type: Private Citizen

Commenter: David Malmsten

Organization:

Excerpt Text:

Here we have the EPA once again trying to become the preeminent master of law and business. They already shut down America's last remaining lead smelter Doe Run company years ago. Lead is a naturally occurring element. Perhaps they can create a rule such that lead no longer exists naturally. Barring that, I recommend the EPA be defunded and shut down permanently as an unnecessary, redundant, dangerous, & toxic agency that serves no essential purpose.

Comment Number: EPA-HQ-OAR-2022_0389-0571-0001

Commenter Type: Private Citizen

Commenter: Brian Hoover

Organization:

Excerpt Text:

I do not agree that the epaulets has the authority to regulate aircraft and the fuel that they are designed and certified for by the FAA. Furthermore, the proposed elimination of 100ll creates a public hazard in the form of engine failure in piston aircraft by removing the fuel they were designed for. As these aircraft will come down, the result crash endangers the public as well. The CSA (Coalition for Sustainable Aviation) has a very good paper submission on this and I whole hearted agree with it. In summary, the EPA does not have the authority to regulate aircraft, nor should 100ll be removed without a replacement that is suitable for all piston engined aircraft

Comment Number: EPA-HQ-OAR-2022_0389-0638-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Jud Lane

Organization:

Excerpt Text:

As both a steward of the environment and an aircraft owner, I oppose these sweeping changes for numerous reasons, including regulatory overreach, safety, logistics, costs, and most importantly the lack of a sensible solution. This appears to be yet another extreme policy that will be forced on the public by an unchecked, unelected government agency.

Comment Number: EPA-HQ-OAR-2022_0389-0640-0003

Commenter Type: Private Citizen

Commenter: Creighton King

Organization:

Excerpt Text:

keep the EPA in their own space and let's keep the FAA doing aviation safety and no longer allow them to waste time on political correctness.. they can't even keep NOTAM's computer running.. they need to focus but not on this.. Creighton King

Comment Number: EPA-HQ-OAR-2022_0389-0644-0001

Commenter Type: Private Citizen

Commenter: Chandra Patey

Organization:

Excerpt Text:

In recognition that emissions and clean air are significantly important, I appreciate efforts for improvement in this area and applaud the huge successes we've enjoyed due to past improvements. That said, I have concern about the current "proposed finding" which states that aircraft which operates with leaded fuel contributes to pollution and endangers public health and welfare. I disagree with the extreme assertions. I ask you to take a thoughtful, measured approach regarding the statements levied as implementing solutions to counteract could have catastrophic consequences to people, livelihoods, quality of life and aircraft safety and reliability as referenced in the Coalition for Sustainable Aviation (CSA) report. As such, I find the CSA's proposal submitted to the EPA to be very reasonable and am requesting that the EPA carefully consider the solutions and address the concerns expressed in it, while being mindful of the heritage that our country embodies in aviation. People look up to and come to the U.S. from all over the world to learn, enjoy and be part of it. Over-regulation degrades and dismisses the value, spectrum, desire and safety therein. Thank you for your consideration, Chandra Patey

Comment Number: EPA-HQ-OAR-2022_0389-0650-0005

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Any disruption to General Aviation has an immediate and lasting impact to Commercial Aviation. o Aviation is an American heritage and offers a Freedom that no other country in the world comes close to.

Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future.

Comment Number: EPA-HQ-OAR-2022_0389-0657-0001

Commenter Type: Private Citizen

Commenter: Jim Wreyford

Organization:

Excerpt Text:

Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. The risk to pilots and passengers associated with fuel availability or engine modifications is far greater than any potential risk to the public from aircraft emissions.

Comment Number: EPA-HQ-OAR-2022_0389-0658-0001

Commenter Type: Private Citizen

Commenter: Peter Kanz

Organization:

Excerpt Text:

There is no need for another government oversight in the aviation community. Simply move run up areas away from the property boundaries of airports near neighborhoods. Use common sense, making blanket policies that govern the entire nation when so few are considered to be in danger, hurts the vast majority who depend on this form of transportation.

Comment Number: EPA-HQ-OAR-2022_0389-0663-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Kay Frizzell

Organization:

Excerpt Text:

Thank you very much for the opportunity to comment on the "Proposed Rule." I respectfully urge you to review and give consideration to the well thought out and documented comments submitted on Jan 11, 2023 by the Coalition for Sustainable Aviation (CSA). I am a pilot and am an owner of a small single engine piston aircraft that would be seriously impacted by the Proposed Rule. In fact, the cost of such regulations, and the safety issues that could occur to me and thousands of other pilots like me would most assuredly cause us to lose our ability to fly due to the dramatic increased cost of the new fuel.

Comment Number: EPA-HQ-OAR-2022_0389-0664-0001

Commenter Type: Private Citizen

Commenter: Eric Baquero

Organization:

Excerpt Text:

There is still too much to be learned/discovered with the lead issue in general aviation fuel and the engines they power. Furthermore, the FAA needs to be the only regulatory agency dealing with the control of aviation in the U.S.

Comment Number: EPA-HQ-OAR-2022_0389-0665-0004

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

Any disruption to General Aviation has an immediate and lasting impact to Commercial Aviation. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future

Comment Number: EPA-HQ-OAR-2022_0389-0668-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

To whom it may concern. We don't need this regulation. The amount of lead is so small it is not worth the harm to the aviation community. Back off.

Comment Number: EPA-HQ-OAR-2022_0389-0681-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

this is just another attempt at a land grab by the county and a few politicians to line there pockets and build sound stages

Comment Number: EPA-HQ-OAR-2022_0389-0683-0001

Commenter Type: Aircraft Owner/Operator

Commenter: Chris Bailey

Organization:

Excerpt Text:

While I am empathetic to the concerns of environment and human welfare, the involvement of the EPA and it's shotgun approach to lead-free AVGAS is completely unsafe and riddled with miscalculation.

Comment Number: EPA-HQ-OAR-2022_0389-0694-0001

Commenter Type: Private Citizen

Commenter: David Bradshaw

Organization:

Excerpt Text:

Those of us that actively involved in Aviation oppose this rule. Most of the comments in favor here have

no idea what they are talking about. Just emotion based nonsense. Aviation is an American heritage and offers a Freedom that no other country in the world comes close to. Unnecessary regulation would only serve to hinder that Freedom - at a tremendous cost today and into the future. The proposed rule appears to be classic overreach by EPA. America does not need more regulations, WE NEED LESS! There is no need for additional oversight by another government agency. FAA has all the authority necessary today to manage aircraft and their emissions. I agree with comments submitted by the Coalition for Sustainable Aviation (CSA) and am requesting that EPA address the concerns expressed.

Comment Number: EPA-HQ-OAR-2022_0389-0695-0001

Commenter Type: Anonymous

Commenter: Anonymous

Organization:

Excerpt Text:

I DO NOT agree with this rule!

Comment Number: EPA-HQ-OAR-2022_0389-0697-0001

Commenter Type: Private Citizen

Commenter: Steven Miller

Organization:

Excerpt Text:

I don't agree with the proposed rule it is just another way to control the public so stop it

Comment Number: EPA-HQ-OAR-2022_0389-0704-0001

Commenter Type: Private Citizen

Commenter: Richard Holtz

Organization:

Excerpt Text:

This is classic redundancy and overreach. There is no need for additional oversight by another agency of the government. FAA has all the authority necessary to manage aircraft and their emissions. It has been acting on the issue for many years. Overall, research shows that the problem is minimal and shrinking. In most cases, lead emissions from aircraft exhaust are indistinguishable from background levels of lead, so it stands to reason that aircraft emissions are not endangering the public.

Comment Number: EPA-HQ-OAR-2022_0389-0710-0001

Commenter Type: Private Citizen

Commenter: Jay Nowak

Organization:

Excerpt Text:

The EPA needs to stay out of this for a safety aspect... As well as It would cause significant damage to the general aviation community. As someone who looks forward to general aviation and I also look forward to having my kids enjoy it as well I am hoping this doesn't ruin that.

Comment Number: EPA-HQ-OAR-2022_0389-0713-0001

Commenter Type: Private Citizen

Commenter: Mark Colman

Organization:

Excerpt Text:

Please No. Your family loved one may need access to Healthcare via Aviation. Enacting thus issue will endanger their life, since affordable fuel will no longer be possible...and the pilots that volunteer their services will no longer be able to afford helping you.
