

**UNLEADED KIDS' COMMENTS FOR  
DRAFT FAA TRANSITION PLAN TO UNLEADED AVIATION GASOLINE**

(OPR USE ONLY)

Reviewer Name	Company Name	Page #	Section #	C, E, or F	Comment/Rationale	Recommended Change/Proposed Rewrite	Resolution of Comment
Tom Neltner	Unleaded Kids	7	1.1	E	<p>The introduction to the Transition Plan refers to public health concerns that are motivating the FAA and the aviation community to seek alternative fuels. However, the plan does not describe those concerns. Children’s health is not mentioned until page 59 in Table 15 as resources related to the safe handling of leaded fuels.</p> <p>We think it is critical for the Transition Plan to describe the public health concerns that are motivating action, especially since the document relies on market forces that are influenced by those changes. Our recommended change is to add those concerns. The proposed text is based on <a href="https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0780">EPA’s Determination</a> published in the October 20, 2023 Federal Register. See <a href="https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0780">https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0780</a>.</p> <p>We recognize that EPA’s determination is described on page 8, but it is only described as examples of action enabling the transition and not a description of the public health concerns.</p>	<p><i>Add underlined text to the text on page 7 as follows:</i></p> <p>These market factors are further influenced by public health concerns from exposure to lead, motivating the FAA and the aviation community to seek alternative fuels. <u>These concerns include EPA’s determination “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.” “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. These findings include potential impacts on agricultural products and aquatic ecosystems. In addition, pilots and mechanics may be exposed to the lead and they may discard the fuel onto tarmac or ground and contaminate surface or ground water with harmful levels of tetraethyl lead. Research indicates that children who live around airports have higher blood lead levels than similarly situated counterparts who do not.</u></p>	

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Tom Neltner	Unleaded Kids	11	New 2.1	C	<p>Chapter 2 of the Transition Plan provides the background to support the plan. However, it makes no reference to EPA's final Endangerment Finding or explains the public health and welfare concerns that are motivating the FAA and the aviation community to seek alternative fuels.</p> <p>We think it is critical for the Background chapter to include a section summarizing those concerns and recommend that it be inserted as new section 2.2 between existing sections 2.1 (describing lead in aviation fuel and current 2.2 (describing development of unleaded fuels)</p> <p>The proposed text is adapted from <a href="#">EPA's Determination</a> published in the October 20, 2023 Federal Register regarding leaded aviation gas. See <a href="https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0780">https://www.regulations.gov/document/EPA-HQ-OAR-2022-0389-0780</a>.</p>	<p><i>Add the following text to a new Section 2.1:</i></p> <p>In October 2023, EPA concluded that emissions of lead from aircraft using 100-octane low lead aviation gas cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare. "These aircraft range from smaller piston-engine aircraft like the Cessna 172 to large piston-engine aircraft like the Curtiss C-46 and the Douglas DC-6, as well as rotocraft, light-sport aircraft, and ultralight vehicles equipped with piston engines.</p> <p>In finding that the lead emissions may reasonably be anticipated to endanger the public health and welfare, the EPA relied on the extensive scientific evidence critically assessed in the 2013 Integrated Science Assessment for Lead (Lead ISA) and the previous Air Quality Criteria Documents (AQCDs) for Lead, which the EPA prepared to serve as the scientific foundation for periodic reviews of the National Ambient Air Quality Standards (NAAQS) for lead.</p> <p>In 2024, EPA updated the <a href="#">Lead ISA</a> adding to the existing body of research that already showed there are serious adverse health effects for children at very low levels of exposure. In the 2024 Lead ISA, EPA found that the evidence of harm from low level lead exposure was even stronger and more widespread than previously understood. Specifically, it</p>	
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						<p>was causally related to total nonaccidental mortality, cognitive effectiveness in adults, and renal effects. The low level exposure was also likely to be causal with pregnancy and birth outcomes and female reproductive function effects.</p> <p>EPA's final action followed the Administrator's proposed findings and includes responses to public comments submitted to the EPA on that proposal. The proposal was posted on the EPA website on October 7, 2022, and published in the Federal Register on October 17, 2022. The EPA held a virtual public hearing on November 1, 2022, and the public comment period closed on January 17, 2023. During the public comment period, the agency received more than 53,000 comments.</p> <p>A broad range of stakeholders provided comments, including state and local governments; non-governmental organizations; industry trade associations representing aircraft engine and airframe manufacturers, fuel producers, fuel distributors, fuel providers, the helicopter industry, and aircraft owners and operators; environmental organizations; environmental justice organizations; one Tribe; private citizens; and others.</p>	

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Tom Neltner	Unleaded Kids	22	4.2	C	<p>The <a href="#">Eagle dashboard</a> is an important—and helpful—tool to track progress. <u>B</u>ut there are no interim milestones or benchmarks with dates connected to them that enable the user to determine whether the effort is on track to meet the Congressional deadlines.</p> <p>We anticipated that the Transition Plan would address this shortcoming by providing interim milestones that include dates when they should be completed. Unfortunately, it does not clearly do that.</p> <p>Section 4.2 describes Phase 1 regarding fuel authorizations and comparison. The text says that completion of FAA authorizations or approvals is projected to be completed by Spring 2027, presumably that is March 2027.</p> <p>The Transition Plan provides a second milestone: the comparative testing of the unleaded fuels that market stakeholders have identified as important to their consideration in adopting a fuel. This includes intermixability between new unleaded fuels. To meet the December 2030 deadline, we think that this should be completed by September 2027.</p> <p>We suggest that FAA revise Table 3 so the formatting is consistent with Tables 5 and 7 and identifies who is responsible for achieving the milestone.</p>	<p><i>Reformat Table 3 to be consistent with Tables 5 and 7 and label the table as “Key milestones in Phase 1.” Table 3 should have four milestones as described below.</i></p> <p>Milestone A: FAA approves STCs for unleaded fuels by December 2026.</p> <p>Milestone B: FAA completes fleet approval via Fleet Authorization by March 2027.</p> <p>Milestone C: FAA completes comparison testing between unleaded fuels and 100LL by September 2027.</p> <p>Milestone D: FAA completes intermixability testing between new unleaded fuels by September 2027.</p>	

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Tom Neltner	Unleaded Kids	24	4.3	C	<p>The <a href="#">Eagle dashboard</a> is an important—and helpful—tool to track progress. but there are no interim milestones or benchmarks with dates connected to them that enable the user to determine whether the effort is on track to meet the Congressional deadlines.</p> <p>We anticipated that the Transition Plan would address this shortcoming by providing interim milestones that include dates when they should be completed. Unfortunately, it does not clearly do that.</p> <p>Section 4.3 describes Phase 2 whereby the market gains experience with the various unleaded fuels. This experience will see increased consumption of unleaded fuels in expanded locations well beyond the early adopters.</p> <p>The section says that Phase 2 is projected to conclude by mid-to-late 2028, providing at least one year for gaining market experience prior to initiating Phase 3. Based on this schedule we indicated in the prior comment that Phase 1 should be completed by September 2027.</p> <p>We suggest that FAA revise Table 4 so the formatting is consistent with Tables 5 and 7 and identifies who is responsible for achieving the milestone.</p>	<p><i>Reformat Table 4 to be consistent with Tables 5 and 7 and label the table as “Key milestones in Phase 2.” Table 3 should have four milestones as described below.</i></p> <p>Milestone A: FAA completes initial insights into price of replacement unleaded fuels by March 2028.</p> <p>Milestone B: Relevant aircraft, engine, and fuel stakeholders complete investigation of reported issues with root cause determined and mitigated by September 2028.</p> <p>Milestone C: More than 50% of airports with infrastructure to supplement more than one AvGas complete transition readiness activities by September 2028.</p> <p>Milestone D: FAA confirms that Phase 2 is essentially complete by September 2028.</p>	

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Tom Neltner	Unleaded Kids	25	4.4	C	<p>The <a href="#">Eagle dashboard</a> is an important—and helpful—tool to track progress. but there are no interim milestones or benchmarks with dates connected to them that enable the user to determine whether the effort is on track to meet the December 2030 deadline for the National Transition (outside of Alaska).</p> <p>We anticipated that the Transition Plan would address this shortcoming by providing interim milestones that include dates when they should be completed. Unfortunately, it does not clearly do that.</p> <p>Section 4.4 describes Phase 3 whereby the airports outside of Alaska will replace 100LL with unleaded fuels outside of Alaska. Table 5 provides five key milestones. The fifth one, labelled E, is the Congressional deadline for the national transition outside of Alaska. Unfortunately, the interim milestones A, B, C, and D have no dates by which they should be met.</p> <p>We suggest that FAA revise Table 4 by providing percentages and dates as well as identifying who is responsible for achieving the milestone.</p>	<p><i>Revise the key milestones in Table 5 by adding the underlined text as described below.</i></p> <p><i>Milestone A: <u>All</u> suppliers decide on the unleaded fuel(s) they plan to offer and make appropriate arrangements through the supply chain <u>by February 2029</u>.</i></p> <p><i>Milestone B: <u>At least 75% of</u> airports/FBOs announce the specific unleaded fuel(s) that will be available at the airport as a 100LL replacement (including Alaska) <u>by May 2029 with 100% by September 2029</u>.</i></p> <p><i>Milestone C: <u>At least 75% of</u> aircraft owners (outside of Alaska) complete alterations to use alternate fuels <u>by December 2029 with 100% by March 2030</u>.</i></p> <p><i>Milestone D: <u>At least 50%</u> <del>the first wave</del> of airports outside of Alaska cease selling 100LL and switch to an unleaded replacement (outside of Alaska) <u>by May 2030</u>.</i></p> <p><i>Milestone E: <u>By December 2030</u>, the last wave of airports outside of Alaska cease selling 100LL and switch to an unleaded replacement.</i></p>	

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Tom Neltner	Unleaded Kids	26	4.5	C	<p>The <a href="#">Eagle dashboard</a> is an important—and helpful—tool to track progress. but there are no interim milestones or benchmarks with dates connected to them that enable the user to determine whether the effort is on track to meet the December 2032 deadline in Alaska.</p> <p>We anticipated that the Transition Plan would address this shortcoming by providing interim milestones that include dates when they should be completed. Unfortunately, it does not clearly do that.</p> <p>Section 4.5 describes Phase 4 whereby the airports in Alaska will replace 100LL with unleaded fuels outside of Alaska. Table 6 provides four key milestones. The fourth one, labelled D, is the Congressional deadline for the transition in Alaska. Unfortunately, the interim milestones A, B, and C have no dates by which they should be met.</p> <p>We suggest that FAA revise Table 5 by providing percentages and dates as well as identifying who is responsible for achieving the milestone.</p>	<p><i>Revise the key milestones in Table 7 by adding the underlined text as described below.</i></p> <p><i>Milestone A: <u>At least 75% of</u> airports announce their 100LL replacement (same as Phase 3) <u>by May 2029 with 100% by September 2029.</u></i></p> <p><i>Milestone B: <u>At least 75% of</u> Alaska aircraft owners complete alterations to use alternate fuels <u>by March 2031 with 100% by June 2031.</u></i></p> <p><i>Milestone D: First Alaskan airport ceases selling 100LL and switches to an unleaded replacement <u>by September 2031.</u></i></p> <p><i>Milestone E: <u>By December 2032,</u> the last Alaskan airport ceases selling 100LL and switches to an unleaded replacement.</i></p>	

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Tom Neltner	Unleaded Kids	24	4.4	E	We are concerned that the statement that “While some airports will begin selling an unleaded fuel in Phase 2, the majority of airports do not have the ability to offer more than one AvGas” represents a significant conclusion that warrants greater explanation. Therefore, FAA should describe these operations more clearly providing numbers and locations, especially if they have only one tank.		
Tom Neltner	Unleaded Kids	46	10.1	F	The last paragraph references the wrong appendix. It should be E not D.	<p><i>Revise the text by adding the underlined text as described below and deleting text that is struckout.</i></p> <p>For additional rulemaking considerations, please reference Appendix <u>ED</u>, Additional Rulemaking Resources.</p>	

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Tom Neltner	Unleaded Kids	64	Appendix E	E	<p>The Transition Plan says “Early in the transition, without regulatory mandates, aircraft owners and operators may lack motivation to modify their aircraft to use an unleaded fuel that might be unavailable in sufficient quantities. Similarly, airports and FBOs may lack motivation to supply unleaded fuels that do not yet have an established market.</p> <p>It is anticipated that the FAA rulemaking would initiate during Phase 2 of the transition and continue to progress through most of the transition period, ultimately culminating in a final rule to support the end of 2030 target date (2032 for Alaska) to transition to unleaded AvGas. The rulemaking process generally involves initiating, proposing, receiving comments, adjudicating said comments, and then finalizing a regulation.”</p>		