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August 25, 2010

The Honorable Lisa P. Jackson
Administrator
U.S. Environmental Protection Agency
Mail Code: 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline
Docket ID No. EPA-HQ-OAR-2007-0294
Federal Register Volume 75, No 81, April 28, 2010, Page 22440

Dear Ms. Jackson,

The State of Alaska strongly opposes the proposed rulemaking to eliminate the use of low leaded aviation gas. Without a substitute fuel, such a rule would turn thousands of piston-engine aircraft in Alaska into scrap, render billions of dollars invested over decades in airport infrastructure useless, devastate our economy, destroy thousands of jobs, and strand hundreds of Alaskan communities and their residents. It would truly be a disaster. Hundreds of Alaskan communities cannot be reached by road as they 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."

Background

The EPA requests comment on two issues: 1) "the data available for evaluating lead emissions, ambient concentrations, and potential exposure to lead from the continued use of leaded avgas in piston-engine powered aircraft;" and 2) "additional information being collected that will inform any future action."

Before I comment on the two issues requested by EPA, I 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 approximately 82 percent of our communities, or 261 communities, are not on the road system. The State of Alaska owns and

operates the largest airport system in North America, which consists of 255 airports, including 173 gravel surfaced airports, 47 paved airports, 34 seaplane bases, and one heliport. In addition, there are 27 locally owned airports, 34 heliports, 64 seaplane bases, and over 500 airstrips. The Federal Aviation Administration's (FAA) Alaskan Region airport system is comprised of a total of 687 airports including 260 airports listed in the National Plan of Integrated Airports System that are eligible for federal funding. The FAA's airplane registration database includes 10,866 airplanes and helicopters in Alaska, of which we estimate 96 percent, over 10,000, are piston-engine aircraft that burn 100LL avgas.

Annual enplanements per capita in Alaska are eight times higher and per capita freight loads are 39 times higher than in the Pacific Northwest states. The aviation industry contributed 3.5 billion dollars to Alaska's economy, approximately eight percent of the gross state product. The Alaska Department of Transportation and Public Facilities estimates the aviation industry provides over 47,000 on-site and off-site jobs, approximately ten percent of the total jobs in Alaska. Aviation is essential to Alaska, and 100LL avgas is critical to our aviation industry.

About 165 air passenger and cargo companies operate in Alaska and the majority of these air carriers use avgas to operate their piston-engine aircraft throughout Alaska. Piston-engine aircraft are ideally suited to Alaska because of 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 their oversized volumes of freight or fuel. There are currently no alternative aircraft suitable for moving cargo and fuel throughout Alaska. 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. These small aircraft are vital to the safe transportation of people and goods in Alaska and are, therefore, critically important to the state's economy and the well-being of its citizens.

Piston powered aircraft require high octane fuel that provides reliable performance at high altitude and in extreme temperatures. Engines operated on unleaded fuel have substantially increased wear, shorter engine life, and higher rates of engine failure. Indeed, while aircraft with low-compression engines using unleaded gasoline can cause engine damage, high-compression aircraft using unleaded gasoline can cause catastrophic engine failure. Engine manufacturers and overhaul shops repeatedly warn about these results. Using unleaded motor gasoline in piston powered aircraft would be dangerous and pose high-risk for human safety.

100 LL aviation fuel has over 60 years of dependable proven safety. Currently, there is no substitute fuel for 100LL, which must be given full weight as EPA constructs regulations using risk analysis. While flying aircraft with low-compression engines using unleaded gasoline usually causes engine damage, flying high-compression aircraft with unleaded gasoline will cause engine failure. Clearly this would be dangerous and high-risk for human safety, which is unacceptable. This is in contrast to the suggestion that 100LL fuel is harmful to human health, which is based upon speculation and not based upon peer reviewed scientific research. When the real risk to human health in Alaska of

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eliminating 100LL in the near term is compared to the speculative harm to human health which may be caused by 100LL fuel, it is clear the balance heavily favors continued use of 100 LL until a workable substitute fuel is developed and/or aircraft engine technology can adapt to unleaded fuel. The safety of the traveling public would be put at risk now by eliminating 100LL avgas.

The EPA has Insufficient Data to Justify Banning Leaded Aviation Gas

The existing environmental lead research on piston-engine powered aircraft is very limited. I will identify several specifics, but clearly there is a great need to still fill in gaps of existing research.

In Section III, Lead Emissions from Piston-Engine Aircraft, EPA asserts that the draft 2008 National Emissions Inventory (NEI) is currently undergoing review by State, local, and Tribal agencies. I believe this is an exaggeration, at best. While the State of Alaska has the capacity to review the NEI, all but a few of our local or Tribal agencies are reviewing this foundational data report. Within the State of Alaska there are 261 federally recognized tribes, or 40 percent of the total number of federally recognized tribes within the United States. EPA has not provided adequate opportunity for tribal consultation and review of the NEI.

There are no lead air monitoring observations listed for Alaska in the NEI for 2008. EPA claims "this inventory is the first NEI to include approximately 20,000 airport facilities in the U.S." This claim is highly suspect as Alaska has the largest airport system in the United States yet there are no observations listed for Alaska.

In Section IV, Lead Concentrations in the Vicinity of Airports, 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." Speculation is unacceptable in this important matter. Furthermore, high compression aircraft engines at high altitude are significantly different conditions than motor vehicles on the ground. The research science on this matter must be done.

Similarly, EPA states "lead emitted during LTO, particularly during ground-based operations such as start-up, idle, preflight run-up checks, taxi and takeoff may deposit to the local environment." Again, this is speculation and EPA must prove these assertions. This is important to identifying dispersion and deposition patterns that may influence the risk for local impacts.

In the summary of airport lead monitoring section, EPA states that one study at the Santa Monica Airport "suggests that ambient air lead concentrations at similar airports with more piston-engine activity, may be higher, and could approach or exceed" the current lead standard. Again, this is speculation and requires more scientific research; one suggestive study is not proof.

EPA admits there are no studies evaluating the potential contribution of piston-engine aircraft emissions on vegetation. This research needs to be done as airport land is sometimes permitted for farming operations.

In the section "Airport-Specific Emissions of Lead from Piston-Engine Aircraft," EPA writes aircraft operations data may be self-reported by airport operators collected by inspectors who work for the State Aviation Agency or by other means. The footnote says "In the absence of updated information... we are using the LTO data provided in the FAA database." These data are faulty or erroneous because the operations data are at best guesstimates. Furthermore, many airport operators have an incentive to report more operations to FAA than there may actually have been. The result of using this data is little more than simple speculation. In general the operations data for small general aircraft airports are not actual counts of aircraft operations.

EPA notes that FAA uses regression analysis to estimate operations at facilities where operations data are not available. The analysis uses based aircraft data. Based aircraft data do not indicate aircraft operations at rural airports in Alaska because there are almost no based aircraft at our rural airports. Almost all aircraft are based in rural hub airports and passengers are flown to and from remote airports from hub airports.

Any Additional Information being Collected Needs to Include Alaska Specific Studies

There appears to be no epidemiological studies regarding 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 our airports. This is especially important information when we consider that aviation and the related 100LL avgas provide basic access to remote communities that are not connected to the road system.

Aircraft operations data for general aviation airports is sketchy at best. These data are guesstimates provided by airport operators, or local people at our remote airports. If operations information is used to estimate 100LL avgas consumption, there needs to be a more accurate way to count aircraft operations other than mere guesstimates.

There are few, if any, based aircraft at our remote community airports. Almost all air traffic flies from rural airports to our remote airports. Therefore, based aircraft data should not be used to estimate 100LL avgas consumption.

Other Considerations

It is also important to note that while military use of 100LL avgas has been historically trending downward, the new Unmanned Air Vehicle (UAV) technology depends on 100LL avgas as a mission critical fuel and the military's demand for 100LL avgas is growing dramatically. The military acquired more UAVs last year than they had acquired in all previous years combined. This is an important consideration for national defense, and disaster response in Alaska because UAVs are beginning to be deployed for disaster response for such events as forest fires and floods.

Even though Alaska consumes a significant amount of 100LL avgas, and there are very few producers of 100LL avgas, an Alaska exemption to a national lower lead emissions standard would not help Alaska because the resultant price of 100LL avgas to supply Alaska only would probably be prohibitively high to make economic sense.

While the EPA intends to improve the environment by eliminating lead in avgas, prohibiting lead in avgas before a substitute fuel is developed would create unintended consequences that would disproportionately impact Alaska Natives. Most Alaskan villages are not connected to the road system, and piston driven aircraft using 100LL fuel provide basic community access. Most of the people in Alaska villages are Alaska Natives, and members of federally recognized tribes. Alaska has 40 percent of all federally recognized tribes, and it is important to recognize the critical role 100LL 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 in light of Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*.

Conclusion

The original petition in this matter by the Friends of Earth requests setting new standards, but states that if inadequate information exists to justify any change that the EPA "commence a study and investigation of the health and environmental impacts of lead emissions from general aviation." It seems evident that much more study of these issues is essential.

Currently, there is no substitute fuel for 100LL avgas, which must be given full weight as EPA writes new regulations. I encourage adequate research and development to prove and certify any new unleaded avgas substitute for 100LL avgas prior to rulemaking.

Considering Alaska's high dependence on piston powered aircraft, and that there is no approved substitute for leaded avgas at this time, and using unleaded gas in piston powered aircraft is dangerous, I believe any rulemaking that would change the current 100LL avgas standards would "adversely affect safety" of the flying public in Alaska. This is significant because the ANPR states "the EPA would be required to consult with the Federal Aviation Administration (FAA), and could not change standards if doing so would significantly increase noise and adversely affect safety." Therefore, the State of Alaska's position is that EPA cannot currently change the standards before an acceptable and certifiable substitute for 100LL avgas is developed.

Finally, I assure you, Alaska wants to be part of the solution. We recognize the need to develop an alternative fuel and/or new technology in the longer term so that piston driven aircraft can run on unleaded fuel, and we want to help develop solutions. In this regard, we request federal research be done to develop an alternative fuel acceptable to the aviation industry and/or low-cost technology to retrofit piston engines to be able to use unleaded fuel. Additionally, epidemiological studies need

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to be done that include Alaska's rural residents who live near our airports. Therefore, I recommend EPA use existing research capacity at the University of Alaska to help develop technology and to ensure it is workable in Arctic climate conditions and at high elevations.

Thank you for providing the opportunity to comment on rulemaking regarding this very important issue.

Sincerely,



Sean Parnell
Governor

cc: The Honorable Leo von Scheben, Commissioner, Alaska Department of Transportation and Public Facilities
The Honorable Larry Hartig, Commissioner, Alaska Department of Environmental Conservation
John Katz, Director of State/Federal Relations and Special Counsel, Office of the Governor
Marc Luiken, Deputy Commissioner, Alaska Department of Transportation and Public Facilities

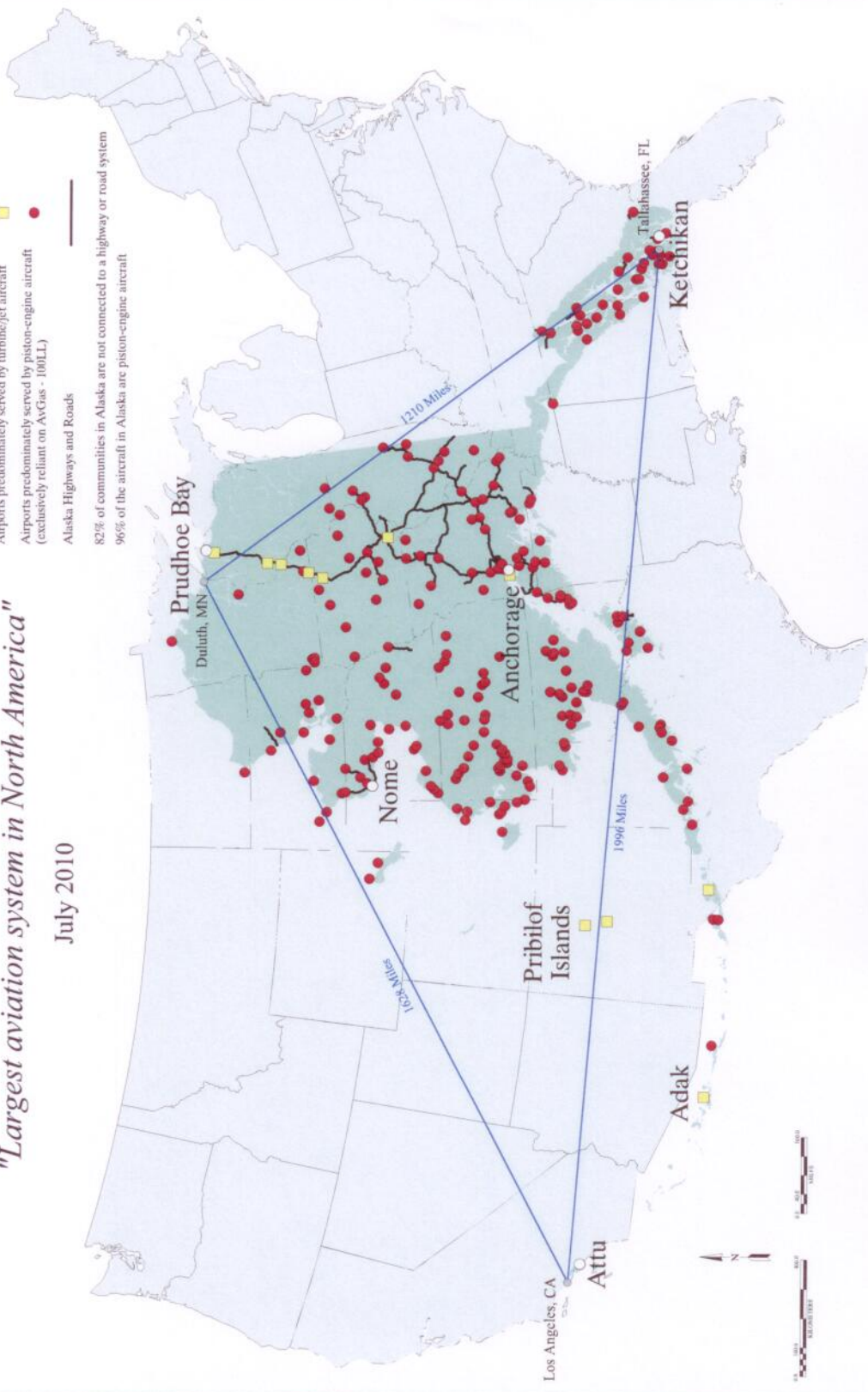
Alaska Aviation System

"Largest aviation system in North America"

July 2010

LEGEND

- 255 State Operated Airports
- Airports predominately served by turbine/jet aircraft
- Airports predominately served by piston-engine aircraft (exclusively reliant on AvGas - 100LL)
- Alaska Highways and Roads
- 82% of communities in Alaska are not connected to a highway or road system
- 96% of the aircraft in Alaska are piston-engine aircraft



Platinum Airport



Nanwalek Airport



Pilot Station Airport



Hooper Bay Mail Delivery

