

**UNITED STATES
EPA REGION 4
ALSO 'UNAWARE'**

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Clifford E Carnicom

Feb 01 2001



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 15 2000

The Honorable Jesse Helms
United States Senator
P.O. Box 2944
Hickory, North Carolina 28603

Dear Senator Helms:

Thank you for your letter dated August 22, 2000, on behalf of Mr. [REDACTED] addressing his concerns about aerial applications of "something" over Asheville, North Carolina, Knoxville, Tennessee, Augusta, Georgia, the states of Florida, and Washington. We have had other citizen complaints about the high altitude aerial spraying of chemical, biological, and other toxic materials over various sections of the United States.

Although we understand Mr. [REDACTED] concern in this matter, the U. S. Environmental Protection Agency (EPA) is not aware of any program to disperse any toxic materials on U.S. population centers or other parts of the country from jet or any other type of aircraft. What we can do is briefly explain how jet engine exhaust occasionally forms contrails, and what EPA is doing to reduce the emissions from these aircraft engines as a byproduct of fuel combustion.

Jet aircraft engines emit tiny particles that serve as condensation nuclei. High-altitude water vapor collects on these particles, crystallizes, in turn creating streaks of frozen water vapor, otherwise known as contrails, from airplanes operating at high altitudes. Some contrails join with other contrails and expand into large, natural-looking clouds of varying characteristics that are

Other contrails and expand into huge, natural-looking clouds of cirrus characteristics that can cover large areas of the sky. A 1999 report issued by the Intergovernmental Panel entitled, *Aviation and the Global Atmosphere*, discusses contrail formation and its effects in more detail. A copy of this report (ISBN number 0 521 66300 8) may be ordered through the Cambridge University Press website at www.cup.org. Further work is required to reduce scientific and other uncertainties of aviation impacts, and EPA and the Federal Aviation Administration fully support continued research to address these issues.

In regard to air quality impacts, although jet aircraft contribute much less air pollution than that from motor vehicles, their overall emissions are increasing every year as air travel becomes more popular. In addition, jet aircraft can contribute significantly to ground-level ambient air pollution in the immediate vicinity of an airport, especially emissions of oxides of nitrogen (NO_x) and hydrocarbons (HCs) which contribute to the formation of ozone. Additional, detailed information on aircraft emissions can be found in a recently published EPA Office of Mobile Sources (OMS) report, *Evaluation of Air Pollutant Emissions from Subsonic Commercial Jet Aircraft*, April 1999. This report is available at the OMS Aviation Emissions web site (www.epa.gov/oms/aviation.htm). It provides an estimation of the contribution of aircraft to air quality emissions in 10 urban areas.

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We appreciate your interest in protecting our environment, and hope that this letter addresses your concerns. If I may be of further assistance, please feel free to contact me or the Region 4 Office of External Affairs at (404) 562-8327.

Sincerely,



John H. Hankinson, Jr.
Regional Administrator

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