

EPA CONTINUES TO PROFESS TO BE 'UNAWARE'

FEBRUARY 25 2000

-----Original Message-----

From: Chet France

[SMTP:BORUSHKO.MARGARET@epamail.epa.gov]

Sent: Friday, February 25, 2000 6:22 AM

To: xxxxxxxx

Subject: Response to AX0000628

Dear Ms. Ray:

We have been asked to respond to your E-mail of
January 19,
2000, to Carol M. Browner, Administrator, U.S.
Environmental Protection Agency
(EPA), expressing your concern about fibers the
Chemtrail Research Fund
state are *falling from the sky,* following aircraft
flights. We
appreciate this matter being brought to the attention of
the EPA.

We are not aware of any program to disperse fibrous
material 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 huge,

natural-looking clouds of cirrus characteristics that can cover large

areas of the sky. (Cirrus clouds are wispy white, usually a natural

phenomenon, consisting of minute ice crystals formed at high altitudes of 20,000 to

40,000 feet.) Research by the National Aeronautics and Space

Administration (NASA) has recognized this process of jet aircraft cloud formation as a

potential problem for blocking sunlight, but not solar heat reaching the

earth, thereby acting as a thermal blanket and perhaps contributing to

global warming. A 1999 report issued by the

Intergovernmental Panel on Climate

Change, 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

Cambridge University Press*

website at www.cup.org. The influence of contrails on cirrus clouds is

noted as a key area of scientific uncertainty that limits the ability to

project aviation impacts on climate and ozone. Further work is required to reduce scientific and other uncertainties of aviation impacts. EPA and the Federal Aviation Administration (FAA) 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 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 ten urban areas.

The aircraft emission standards for gas turbine (jet) engines which power civil aircraft have been in place for about twenty years.

Before an engine type can be sold or installed on an aircraft, the manufacturer must test its emissions on the ground by

simulating in-use conditions. EPA sets the emission standards for the engines, and the FAA monitors the certification process and enforces the standards. Emission standards apply to essentially all commercial aircraft, comprising scheduled and freight airlines. Two classes of aircraft, military and general aviation, are presently not covered. Controls on engine smoke and prohibitions on fuel venting were instituted in 1974 and have been revised several times since then. Beginning in 1984, limits were placed on the amount of unburned HCs * also termed volatile organic compounds (VOCs) * which turbine engines can emit per landing and takeoff cycle. In May of 1997, EPA adopted the current emission standards for gas turbine engines of the International Civil Aviation Organization (ICAO) for NO_x and carbon monoxide (CO). In addition, in the near future, EPA plans to adopt the more stringent NO_x standards expected to be formally accepted by ICAO later this year, for implementation in 2004. EPA is committed and working to reduce emissions from jet engine exhaust. I hope this letter will help answer your questions. Please feel free to contact us if you have any further questions.

Sincerely,

Chester J. France, Director
Assessment and Standards Division

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