

Exposing Airports' Poison Circles

by Sharon Ruth Skolnick

Earth Island Journal

Winter 2000-2001. Vol. 15, No. 4.

Used with permission

If you live within six miles of an airport, you are at heightened risk of dying prematurely from environmentally induced cancer. The culprit is the pollution spewing from jet aircraft, ground vehicles and airport maintenance operations.

The situation is about to get worse. On April 5, President Clinton signed into law the Airports Expansion Act (AIR-21), which gave the green light to build new airports and add or extend runways at some 2,000 existing US airports, including more than 500 airfields in major metropolitan areas. AIR-21 budgets \$40 billion for airports construction, expansion and improvements - a 33 percent increase - over the next three years.

Jack Saporito, President of the US Citizens Aviation Watch Association (CAW) - a coalition of concerned municipalities, environmental and grassroots groups, aligned with 27 like-organizations around the world - points to studies that have linked airport pollution to cancer, asthma, liver damage, lung disease, lymphoma, depression, myeloid leukemia and tumors. According to CAW, the impacts of airport pollution can effect people "living and working at distances greater than 30 miles from the facility." Today, 70 percent of US residents live within 20 miles of a major airport.

Airport critics are frustrated by the lack of official concern. "We have the sources, we have the pollutants in great amounts, we have the sick and dead people," says Saporito. "We just haven't linked it all together yet in an epidemiological study."

But a mounting number of studies clearly suggest that airport pollutants have become chemical grim reapers, gradually sickening and killing nearby residents. Data from the Washington Health Department Census, which compared 1991-95 illness-and-mortality rates for residents near the Seattle-Tacoma (Sea-Tac) airport with those of Seattle overall, found that infant mortality near the airport was 50 percent greater, heart disease was 57 percent greater, cancer deaths were 36 percent greater (31 percent of those were lung cancer) and deaths from all causes were 48 percent greater. Average life expectancy for airport neighbors was 70.4 years, compared to Seattle's average of 76 years.

In August, a study by Environ International Corp. detected 219 volatile compounds in the air around Chicago's O'Hare International Airport (78 of them at "increased levels") and estimated the resulting cancer risk for people living near the airport as five times higher than the regional average. As Joe Karaganis, an attorney for concerned airport neighbors put it, the Environ study proves that O'Hare "is the number-one toxic polluter in the state of Illinois."

Cancer in the Air

The American Cancer Society predicts that in the US, one out of every two men and one out of every three women will eventually be diagnosed with cancer. In July, the *New England Journal of Medicine* reported that environmental factors - mainly radiation and chemical pollution - are roughly twice as likely as genetic factors to contribute to cancer cases.

Aviation is responsible for emissions of nitrogen oxide, hydrocarbons, sulfur dioxide, naphthalene, benzene (a known carcinogen), formaldehyde (a suspected carcinogen), and dust particles that harm human health and contribute to global warming.

The poison circle from a single runway can extend six miles from its hub and run 20 miles downwind. The cancer rate for people living on the perimeter of Chicago's O'Hare airport is 70 percent higher than the rate for the average Chicagoan, according to CAW. A University of Illinois School of Public Medicine study estimates that pollution from O'Hare's seven runways could be affecting the health of five million individuals.

Dioxins from spilled jet fuel, di-ethylene glycol from de-icing fluids, leaked engine oil and dissolved jet exhaust particulates commonly flood the tarmac and seep into the ground, streams, and creeks bordering O'Hare. The run-off ultimately flows into the Des Plaines River, endangering the health of downstream communities.

A 1993 EPA health risk assessment concluded that aircraft engines are responsible for approximately 10.5 percent of the cancer cases within a 16-square-mile area surrounding Chicago's Midway airport. The National Resources Defense Council warns that "the same conclusion might apply to people living immediately adjacent to airports all over the country."

The Santa Monica Airport is the oldest community airport in Los Angeles County and the busiest single-runway airport in the nation. In August 1995, the Los Angeles Unified School District asked the FAA to determine the airport's health impacts on the students and staff of nearby schools. The study determined that hydrocarbons and carbon dioxide far exceeded the National Ambient Air Quality Standard, and that maximum cancer risks were 23 times greater than the Federal Clean Air Act's "acceptable risk criterion" of one-in-a million.

"Environmental Bombs"

Jet planes pollute much more on the ground than in the air. Up to 90 percent of aircraft hydrocarbon and carbon monoxide emissions occur when planes idle and taxi.

In 1998, the Environmental Organization, Copenhagen (EOC, a coalition of Danish groups fighting pollution around the Copenhagen airport) published a report calling airports "environmental bombs" and noting that aviation "seems to be a 'sacred cow,' excluded from all legislation to minimize environmental impact and damage.

Aviation is the only transport form not regulated in any significant way to reduce environmental impact."

The EOC urged severe reductions of hazardous airport emissions as part of Denmark's compliance with global-warming-gas reductions under the Kyoto Agreement. Among the EOC's recommendations: Outlaw the worst aircraft (the older TU 135B is 88 times more polluting than a newer B777-300 jet); reduce the number of aircraft awaiting take-off (it is common practice for 10-20 aircraft to idle 20-40 minutes at full power); improve per-capita fuel efficiency by eliminating first-class and business-class seating and forbidding near-empty flights, and; hold aviation accountable for its fair share of Kyoto greenhouse gas reduction.

In the US, a pollution-reduction study for Sea-Tac estimated that taxiing on two engines instead of four would reduce hydrocarbon emissions by 80 percent and carbon monoxide emissions by nearly 70 percent. Emissions could be cut further by towing aircraft to and from terminals. Fuel vapor recovery also can reduce aircraft hydrocarbon emissions, and fuel modifications can reduce nitrogen oxide particulate emissions by 30 percent.

Sacred Cows and Human Sacrifices

The 1990 Clean Air Act requires the EPA to control emissions of hazardous air pollutants from major sources "such as factories, refineries, and mobile sources." Although airfields are among the largest single-source emitters of pollutants, air pollution assessments are rarely conducted for US airports. Because of the revenue large airports generate, local municipalities have been in no hurry to stem the flow of toxins.

As Saporito sees it, the problem is that "there is no health agency watching airports. Most emissions are exempt" from reporting and those that are regulated are "self-reported and grossly under-reported."

"It's pretty much an unregulated industry," says CAW's Saporito. The Federal Aviation Association (FAA), which is supposed to regulate the airline industry, also works to promote the industry. (Saporito recalls invoking the name of the FAA during a meeting with one major airline senior executive. "FAA?" the latter responded dismissively, "We *are* the FAA.")

How many more airport neighbors and airport workers must suffer lingering illness - or prematurely take that last flight out - before the US acts?

Supplemental research by Gar Smith.