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ALLIANCE OF RESIDENTS CONCERNING O'HARE (AReCO)

RELEASE OF NEW REPORT IMPACTING O'HARE AIRPORT POLLUTION

A new report is released today, THE "SEA-BREEZE" OR LAKE-BREEZE EFFECT AND IMPACT ON POLLUTION CONCENTRATIONS/DISPERSIONS FROM SOURCES SUCH AS AIRPORTS, R. E. Ruthenberg 6/6/02. [www.areco.org]

This report examines the potential for the "lake-breeze effect" to significantly alter pollution dispersions in areas near large bodies of water, such as exists in the Lake Michigan and O'Hare Airport geographical relationship and concludes that such weather conditions can and do occur often throughout the year and can act to significantly concentrate area pollutants.

Background

In 1993 the EPA completed a study¹, requested by Congressman William Lipinski (IL-D), of the Midway Airport toxic emissions situation, concluding that airport operations were a major contributor to cancer risks in the area, based upon known carcinogenic pollution emission risk factors. In August 2000, a study of toxic pollution risk factors associated with O'Hare Airport was completed² by Environ, Inc. and similarly concluded that cancer risk factors to the surrounding residential population were significantly greater than those allowed by EPA regulations.

Both of these historically important studies were based on predictive modeling of the airport toxic emissions and dispersions thereof, using EPA risk factors to predict the impact of these pollutants on exposed residents at varying distances from the airports. Neither investigation counted actual cancer incidences in the neighborhoods in an attempt to correlate to the predictions, as that would have been well beyond the scope of the studies.

It was felt that there was an unfulfilled need to examine actual cancer incidence rates instead of predicted rates. As a result, the report "INVESTIGATION OF THE CANCER INCIDENCE RATES IN THE VICINITY OF O'HARE AIRPORT"³ was completed and released 3/21/02. Zip code areas were used for the examination in order to be of small enough size as to allow spatial discrimination of any incidence rate variations of the population within the areas and to minimize any "averaging away" of significant variations. The examination of a 10-mile radius surrounding O'Hare Airport concluded that incidence rates were substantially higher (50-100% greater than state averages) in areas generally "downwind" from airport pollution emissions.

As an example: What this means, putting this into human suffering terms is, the cancer study shows that within a 277,000 population of eight northeastern communities downwind of O'Hare there is an excess of about 800 new incidences of cancer each year, over and above what would be expected based on the state's average (0.68%/year incidence rate vs. 0.4%/year state average rate).

¹ ESTIMATION AND EVALUATION OF CANCER RISKS ATTRIBUTED TO AIR POLLUTION IN SOUTHWEST CHICAGO, USEPA, 1993.

² "PRELIMINARY STUDY AND ANALYSIS OF TOXIC AIR POLLUTANT EMISSIONS FROM O'HARE INTERNATIONAL AIRPORT AND THE RESULTING HEALTH RISKS CREATED BY THESE TOXIC EMISSIONS IN SURROUNDING RESIDENTIAL COMMUNITIES", Mostardi-Platt Associates and Environ Corporation, sometimes known as the "Park Ridge Study".

³ Reference www.areco.org

Notwithstanding the pain, suffering and costs, this translates (approximately 50% mortality rate) into about 400 extra deaths each year (**The equivalent of one 747 aircraft crashing each year in those downwind communities!**)

These significant findings lead us to the next step: Though “downwind” is a logical association of the higher incidence rates to the major airport pollution source, the report suggested that the existence of weather related “inversion layers” combined with the presence of Lake Michigan would likely be creating pollutant blocking effects that would tend to cause the pollutants to be retained in the area (between the airport and the lake), thus increasing their carcinogenic potential.

These possibilities were examined in much greater detail, resulting in the release of the subject Lake-Breeze report.

At the time of the release of the original Cancer Incidence report, the Illinois Department of Public Health (IDPH) indicated that they were also nearly ready to release a study on cancer incidence rates near O’Hare and Midway airports. This they did⁴ on or about 4/16/02.

That report also used zip code areas to examine incidence rates. However, the premise of the analysis was to attempt to examine rates in a fashion that coincided with the Environ study cancer risk contours, in order to attempt to determine if there were any apparent correlations between the Environ predicted risks and actual incidences. The report concludes, unsurprisingly, that no such correlation was seen, admitting that the probability of such correlation was remote because of the vastly greater actual incidence rates than those predicted, which were based on the relatively few toxic constituents considered.

The IDPH also found no significant correlation of incidence rates to distance from the airport. Again, this is not surprising as (1) direction (from pollution sources) is an important parameter that was not included and (2) grouping together of dozens of zip code analysis areas (to “fit” within Environ contours) defeats the ability to examine discriminations between these areas. This approach is guaranteed to “average out” any significant differences between local areas.

AReCO believes that the subject Lake-Breeze report adds substantial weight to the argument that the health of the communities surrounding O’Hare Airport is already being considerably damaged by largely unregulated airport pollution emissions (aircraft pollution concentrations are not EPA regulated) and that a future doubling of operations there would bring further disastrous results to the surrounding communities. Pollution impact judgments must consider altogether the combination of types of emissions, source concentrations, dispersion effects (including lake-breeze considerations), other dynamic effects such as photochemical reactions, and affected populations.

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⁴ CANCER INCIDENCE IN POPULATIONS LIVING NEAR CHICAGO O’HARE AND MIDWAY AIRPORTS, ILLINOIS 1987-1997, Illinois Department of Public Health.