

## STOL AIRCRAFT FOR FORCES

The federal Department of Supply and Services is purchasing eight light-transport aircraft valued at \$4.56 million, for the Department of National Defence. Delivery will start in May and will be completed in August.

The DHC-6 *Twin Otter* aircraft, manufactured by de Havilland Aircraft of Canada, Toronto, will be used primarily in the search-and-rescue and utility-transport roles and in support of the northern operations of the Canadian Forces.

Two of the new aircraft will be based at Canadian Forces Base Namao, Alberta and four at CFB Trenton, Ontario. Five will replace search-and-rescue *Dakotas*, while the sixth, based at Trenton, will be assigned to support United Nations operations replacing an existing *Caribou*. The two remaining *Twin Otter* planes will be based at Yellowknife, Northwest Territories in support of the newly-formed Northern Region headquarters.

The *Twin Otter* is a two-engined, light STOL (short take-off and landing) utility-transport aircraft capable of carrying up to 20 passengers or almost 5,000 pounds of cargo. It is powered by two PT6A-27 turboprop engines, designed and built by United Aircraft of Canada, Longueuil, Quebec. The *Twin Otter* can operate on wheels, skis or floats, as required.

## POLLUTED PRECIPITATION

Rain and snow in the area of the Great Lakes may have higher concentrations of certain heavy metals than is permitted by Canada's Raw Drinking Water Standards, according to the initial results of a new survey program being conducted by the Canada Centre for Inland Waters. In addition, atmospheric precipitation seems to be contributing 5 to 10 per cent of the total "nutrient input" of nitrogen and phosphorus to Lakes Erie and Ontario.

The program is part of a long-term effort to assess the contribution of rain, snow and dust to the pollution of the Great Lakes. Officials of the Centre emphasize that, because of wide fluctuations in the results from individual samples, it will be at least three years before a reliable assessment can be made and trends can be evaluated. Meanwhile, scientists say that the levels of heavy-metal concentration in the lakes are well below permissible levels.

## LEVELS OF CONTAMINATION

The metals under study are lead, copper, zinc, iron and cadmium, concentrations of which show wide variations, with high levels occasionally occurring. In the Toronto-Hamilton area, lead concentrations were higher than in the rest of the sampling area; a

sampling-station on Toronto Island averaged 65-70 parts in a billion (ppb), compared to the maximum of 50 ppb acceptable under the Raw Drinking Water Standards.

Cadmium concentrations average 18 ppb near Guelph, while the maximum permissible level is 10 ppb. Concentrations of the other heavy metals, however, were found to be well below the maximum permissible levels. Initial sampling of mercury in rain at Burlington indicated only very low levels of contamination.

Some of the metals in question - for example zinc - are essential nutrients in plants and animals, including humans, and in low concentrations in rain are probably an important source of nutrients for the "eco-system".

With regard, however, to heavy metals in general, if further sampling confirms the initial data the fact that they exceed, in all cases, the desirable levels of the Raw Drinking Water Standards could justify some concern. Officials stress the fact that ordinary drinking-water supplies are safe, though people who collect and drink rainwater may have reason for caution.

Commenting on the results of the CCIW survey Mr. Jack Davis, Minister of Fisheries and Forestry, said that the preliminary data indicated the importance of increasing programs to monitor all sources of pollution. Further studies will involve assessment of the sources of the nutrients and undesirable metals in precipitation.

"This is a very vivid illustration," Mr. Davis declared, "of the importance of having a close relation between air and water pollution research and control programs, which will be made possible by the Government's action to form the new Department of the Environment."

## CATTLE FOR BRAZIL

A group of leading Brazilian cattle-breeders on a recent two-week visit to Canada purchased two plane-loads - 80 head - of Holstein Friesian dairy cattle for \$200,000. As guests of the Department of Industry, Trade and Commerce, the dairy cattle mission visited farms in southwestern Ontario and the Royal Winter Fair, Toronto, where they bought \$25,000-worth of livestock. The cattle were to be flown from Toronto in DC8 jets.

The five-man mission came to Canada to see at first hand Canadian capabilities in the supplying of frozen semen as well as purebred cattle. The Brazilians hope that, by cross-breeding Holstein Friesians with their native Zebu cattle, a stock will be produced possessing as well as the milk-producing qualities of the Canadian cattle, the Zebu's resistance to tropical conditions.