

ZEPHYR



Environment
Canada

Environnement
Canada

Atmospheric Environment Service
Service de l'environnement
atmosphérique

FEBRUARY-MARCH 1990

New Ice Centre and Ottawa Weather Office Colocated and Operational

Two major AES operational units are now located at the historic Lasalle Academy in downtown Ottawa, opposite the architecturally impressive National Gallery.

The Environment Canada Ice Centre located on three floors behind the original College, contains some of the world's most technically advanced ice reconnaissance and ice analysis equipment. This ranges all the way from an impressive new system for tracking the course of potentially destructive icebergs, known as the Berg Analysis Prediction System (BAPS), to a new flight planner for aircraft (both government and private) preparing to set out on ice patrol missions in the Arctic or off Canada's East Coast.

Don Champ, director of AES Ice Branch says that this state-of-the-art Ice Centre is now fully operational and open for business. "We can provide complete background support to the field ice service specialists of AES who deliver front line decisions and information to Canadian Coast Guard icebreaker captains and to ice operations officers".

The Weather Office used to be located at Ottawa International Airport, but in late fall it moved to its present downtown location next door to the Ice Centre. A completely bilingual W04, it supplies broadcast weather reports in French to locations as far away as Windsor in southwestern Ontario and Hearst in the north. In all, the Ottawa office now receives close to a quarter million public telephone (ATAD) enquiries per month and due to its new downtown location, tends to receive an increasing number of public visits. **(For more information on the Weather Office, please see page 5.)**

Identifying the AES name with the Lasalle Academy address is completed by the fact that the same building now houses ADMA Elizabeth Dowdeswell's office as well as that of the Policy, Planning and Assessment Directorate.

The Ice Centre, now operating 24 hours a day, 365 days a year, has many other state-of-the-art features, from a wide-ranging satellite communications network to a multi-terminal

Cont'd. on pages 4-5



Ice forecaster Hugh McRuher is on the cutting edge of high technology at the new Ice Centre, as he tracks the course of potentially dangerous icebergs on the Berg Analysis Prediction System (BAPS).

Stamp, poster, bands Celebrate Weather 150

Plans by AES to celebrate 150 years of continuous weather observing across Canada are snowballing on both the national and regional fronts.

The project, now known as WEATHER 150 will include issue by the Canada Post Corporation of a commemorative stamp to honor weather observing in Canada since 1840. The multicolor stamp portrays cumulus clouds, a rainbow and the meteorological modelling symbol for the type of weather shown. Fifteen million copies of the stamp will be issued and up to 15,000 custom-designed first day covers will bear a message from Environment Minister Lucien Bouchard and be distributed to volunteer climate observers, severe weather watchers, the media, all AES employees, and to 150 national weather services, members of the United Nations World Meteorological Organization based in Geneva.

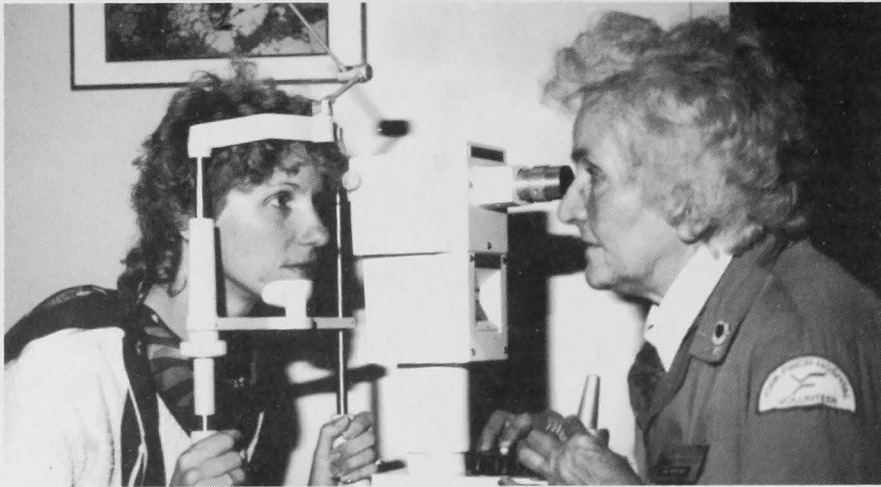
In addition, AES is producing a poster symbolizing the progress of weather observing, from an ancient weather cock to a remote sensing weather satellite, as well as a lapel pin to be distributed to all volunteer observers — "backyard", severe weather watchers, and marine observers.

By early, 1990 all AES regions had expressed a strong interest in participating in WEATHER 150 anniversary celebrations. Projects suggested so far include joint AES-Agriculture Canada plans to celebrate long term observing in Brandon, Manitoba; commemoration of centennial observing stations in Calgary and Banff, an open house at the Fredericton, New Brunswick weather office, and an offer by the National Museum of Science and Technology in Ottawa to help mount an important display of antique meteorological instruments.

At the September 5, 1990 celebrations, to be held on campus at the University of Toronto, near the site of the original 1840 observatory, there will be a pageant consisting of soldiers or militia dressed up in the uniforms of the British Royal Artillery, who set up the first experimental observing station at Fort York in January 1840, then moved it nine months later to the univer-

Cont'd. on page 3

Canada



178 AES Downsview employees attended a glaucoma screening clinic held in the Headquarters building October 3-5. Volunteers from North York's York Finch Hospital carried out the screenings. Occupational Health nurse Olga Leskiewk says that one employee was found to have an elevated pressure and after referral to an ophthalmologist was placed on medication. Olga adds that glaucoma can lead to blindness and says that physicians recommend a glaucoma test every two years. In the picture Deedee Davies of Central Services Directorate Administration is being screened by a volunteer.

Performance in the Field

Twice a year Transport Canada and the Atmospheric Environment Service conduct annual inspection tours of Contract Weather Stations throughout British Columbia. Most of the contract weather stations in B.C. are funded by Transport Canada and managed by AES.

This year a special Regional Director General Award was presented to the Sparwood contract weather station, located in the Kootenay region of B.C. for their overall high performance record. The Sparwood weather observing station was recognized for their higher than average quality observations and lowest percentage of errors for the 1988 calendar year. For the past five years they have consistently been one of the top contract weather stations in the Pacific Region. Other honorable mentions for 1988 include contract weather stations Squamish and Mackenzie also for their high record of quality observations. The Regional Director General's Award of Excellence for contract weather stations has now become an annual recognition award in the Pacific Region for maintenance of high performance in the field.



Sparwood Contract Weather Station, left to right: Marelyne Penitch, Dave Watson (AES). Carol Brewers, Brenda Humphreys, Shirley Mortimer (contractor), and Dave Griffin (Transport Canada).

SAFETY FIRST

Sick Building Syndrome

We are increasingly hearing about "sick buildings" — that is, buildings where the lack of fresh air combined with things such as the build up of contaminants from furniture, rugs, photocopy machines and other equipment in the workplace may be causing building occupants to become sick. Les Terrasses de la Chaudière in Hull, which houses federal government employees, including some Environment Canada personnel, has been studied extensively by experts to try and find out and eliminate the sources of contaminants. What exactly are the problems, and what can be done?

Considering the fact that the average city dweller in North America spends approximately 90% of the time indoors, the indoor environment is of considerable significance to our physical and physiological well being. In recent years, the non-industrial indoor environment has been considered relatively safe, but this presumption is now in question. Complaints about indoor air quality became common in the 1970s with the implementation of energy conservation measures. One of the most common measures taken was to seal large buildings to prevent indoor air from escaping and outdoor air from entering and to keep at a minimum the amount of outdoor or fresh air brought into buildings. This resulted in the same air being re-circulated in the building systems which allows for the build-up of contaminants. Many buildings also cut back on ventilation (the amount of air flow) and shut their systems down overnight and on weekends.

The occupants of these so called tight buildings suffer from a variety of symptoms including irritation of the eyes, nose and throat, dizziness, fatigue and headache, stress and irritability. The symptoms generally commence in the morning, become more pronounced as the day progresses and disappear when the occupant leaves the building. In some cases these ailments have an adverse affect on the productivity of workers.

Physical agents of the environment such as temperature, humidity, noise and lighting may be the source of some symptoms. The source may also come from the build-up of contaminants such as formaldehyde from furniture and building materials, ozone from photocopy machines and styrene gas from carpets. Other causes include housing more people and equipment in office areas than the complexes were designed for.

As a result of studies on Terrasses de la Chaudière and other buildings, it is recommended that ventilation, illumination, acoustic and mechanical systems be tested regularly especially where changes have occurred in the office environment (for example, where an open landscape effect has been replaced with partitions and walls). If new equipment has been added to the workplace, check to make sure that overcrowding is not occurring.

Cont'd. on page 11

Highlights

New Ice Centre/Ottawa	
Weather Office	1
Weather 150	1
ADMA "introduces" herself	6
Day in the Life: Computer Analyst	8
AES helps fight Forest Fire Threat	9
Children greet Alert Staff	10
Zephyr Breezes	11
Staff Changes	12

ZEPHYR

ZEPHYR is a staff magazine for employees of the Atmospheric Environment Service, Environment Canada, produced by the Communications Directorate of Environment Canada.

Please address correspondence or article contributions to: ZEPHYR, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario M3H 5T4.

Editor: Gordon Black
 Editorial Assistant: Jean Schlenkrich
 Photo Assistant: Bill Kiely
 Phone: (416) 739-4760



Environment
Canada

Environnement
Canada

Atmospheric
Environment
Service

Service
de l'environnement
atmosphérique

Weather 150 cont'd.

sity grounds. While a band from the Seventh Toronto Regiment Artillery plays traditional marches, it may be possible for red-coated soldiers to take token weather observations on specially installed ancient instruments while Juri Werner, the University's regular climate observer, corroborates their readings on more modern instruments. Those on the podium during the ceremony will likely include representatives from the National and Historic Sites Branch of Canada's National Parks, senior officers of the British Royal Artillery and the Canadian Department of National Defence, the British High Commissioner (Ambassador), the Mayor of Toronto, the Assistant Deputy Minister of AES and, in all probability, Lucien Bouchard himself.

AES and Environment Canada's Communications Directorate will also produce fact sheets, pamphlets, press releases, media backgrounders, and magazine articles and will have a special WEATHER 150 symbol printed on all AES stationery during 1990. They will also arrange national and local television and radio interviews and in general inform the media and the public of the valuable work being performed by Canada's several thousand volunteer observers.

The overall thrust of WEATHER 150 will be to present the anniversary as a major national event. The emphasis will not only be on the past history of weather observing. Efforts will be made to connect long term continuity in maintaining climate records with the need to possess climate data that will assist research scientists working on such vital questions as the study of future global warming and other threats to earth's fragile atmosphere.

OBIE The Observer...



"TYPICAL GOVERNMENT BUREAUCRACY....
NO INSTRUCTIONS FOR ASSEMBLY."

Alcide Ouellet

Alcide Ouellet, one of Canada's best known weather broadcasters, who was a meteorologist and long time employee of both AES and the Meteorological Branch of Transport Canada, died of cancer on October 29 at the age of 65.

Beginning his career at the Dorval (Montreal) weather office in 1951, Alcide remained with the weather service until his retirement in 1981. He continued, however, to give regular television weather commentaries on the French CBC (Radio Canada) in Montreal until only a month or two before his death.

Widely acclaimed among the meteorological community for his ability to popularize the essentials of weather forecasting, he received special recognition from the Canadian Meteorological and Oceanographic Society (CMOS) for his work as a weather communicator. Leading AES personnel in Quebec Region have paid tribute to his life and work.

Jean-Guy Cantin, head of Training, said that he was both humane and self effacing. He was always ready to assist the younger generation in starting out on their meteorological careers but never forgot his contemporaries.

Jacques Vanier, chief of the Quebec Weather Centre, said that Alcide had a solid background of knowledge which gave his weather forecasts and meteorological commentaries a unique flavor.

Pierre Ducharme, chief of Weather Services, said that Alcide led his colleagues with giant steps in the area of promoting public weather forecasting. He also was a Quebecker who showed pride in his language.

Roger Tremblay, Telecommunications chief, said that Alcide was jovial, reliable, a good listener, receptive to new ideas whatever their source and he radiated a sense of goodness.



A group of meteorologists at the Quebec Weather Centre added that Alcide was a leading figure in French Canada and a pioneer in the work of popularizing weather forecasting in the French language.

Ice Centre cont'd.

computer with superb on-screen map producing capabilities, known as the Ice Data Integration and Analysis System (IDIAS). Together they help ensure safety from ice hazards for commercial shipping, offshore drill rigs and shore installations. Equally important, the new technology ensures rapid turn around of data produced at the centre — from a couple of days in the mid-eighties to around six hours currently.

More than two dozen AES forecasters, administrators, ice archivists and support staff work in the building and these are backed up by over a dozen service consultants mainly concerned with maintaining the eight or nine computer systems essential to running the Centre. It should be noted that some AES ice observers who used to fly regularly on ice reconnaissance missions and prepare their data aboard cramped, vibrating aircraft, now work comfortably at the Centre where they have access to fast and efficient cartographic and display equipment.

One of the advantages of the new Ice Centre is to allow greater collaboration between the public and private sectors, both in communications and in actual ice observation. For example, a multi-million dollar contract signed in 1988 with Intera Technologies, enables precision radar imagery to be provided by company aircraft and by Environment Canada's DASH-7. The data is first beamed down to shore-based receiving stations in the field then relayed up to the ANIK satellite by a TELESAT transmitter. The signal is next picked up by the big communications dish on the Ice Centre roof and the incoming data is then analyzed, processed and transmitted to users (The Canadian Coast Guard Service is the biggest customer). This communications link is called the Ice Reconnaissance Data Network (IRDNET) and allows data from all reconnaissance aircraft to be received at the Centre accurately and in real time.

Go into the somewhat crowded computer room and you will see up to a dozen, specially cooled, box-like machines controlling the Centre's computing nerve centre. Out of these, two systems play star roles in the Centre's need to

April 4, 1989: For the first time in the team's history, the Montreal Expos were able to open their season at home, thanks to the new roof on the Olympic Stadium. It was passable baseball weather: cloudy with sunny breaks and intermittent showers and a high of 17.3°. Final score: Mets 10, Expos 6.

April 10, 1989: Above-normal temperatures and below-normal precipitation over the Great Lakes Basin brought about a substantial drop in water levels since the fall of 1986. By April 1989, Lake Huron had fallen 1.2 m below its October 1986 level.



This winter picture of the historic Lasalle Academy helps identify AES's big new Ottawa address. Major Service offices are in the "tower" behind the former seminary/hotel/barracks.

provide fast, accurate ice information to a variety of users on both the national and international level.

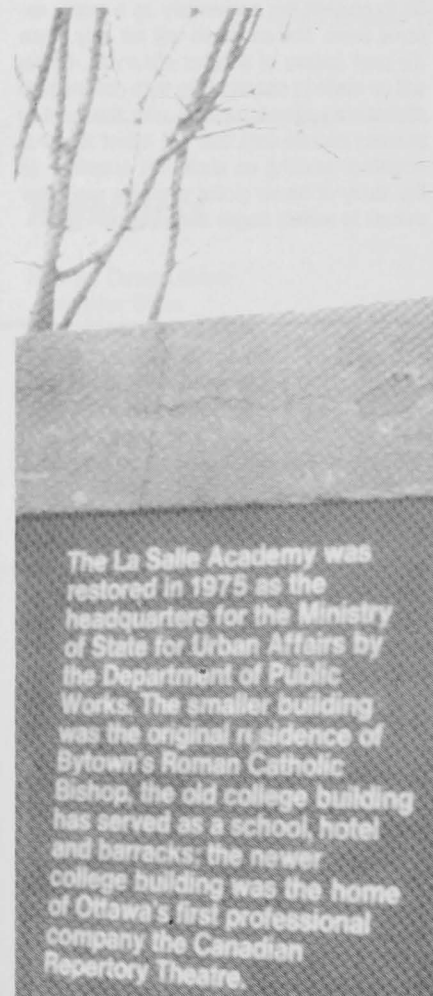
Like most other computerized systems, BAPS consists of two work stations having two screens, a couple of keyboards and a mouse or "puck". This fairly standard configuration allows iceberg data supplied by reconnaissance aircraft, Coast Guard icebreakers, private company helicopters or satellites to be sorted, counted and traced from the source (probably located in the Greenland-Ellesmere Island area) to "melt-down", as far south as Bermuda. One thing is certain: modern iceberg technology almost guarantees there will never be another Titanic disaster.

The other Ice Centre ace is IDIAS, essentially a multiwork station computer system with major graphics, editing and image analysis capabilities. Cost effective and flexible, it can process a great variety of data from airborne radar images to Canadian Coast Guard ice charts. By means of overlays it reduces everything to one standard, workable scale.

The system, built by MacDonald, Detwiler and Associates of Richmond, B.C. is composed of 10 minicomputers, half used as data processors and half in the work stations. Two minicomputers are equipped to allow IDIAS to process large quantities of digital imagery, which can then automatically be reduced to a single, uniform scale. With all data integrated on-screen at the work stations, a wealth of meaningful ice information can be provided.

IDIAS is an uncomplicated system, easy for operators to learn, that does away with the need for pencils, paper or light tables. (All imagery analysis is done on-screen which in fact becomes the location for all major ice data

Cont'd. on page 5



The historic ties of the building can be read on this wall plaque.

Ice Centre cont'd.

decisions). Obviating such mundane tasks as plotting, hatching or scale reductions, IDIAS allows operators to perform more professionally. Overall, the system allows all sources of ice data to be integrated with much greater accuracy and timeliness, and definitely improves the quality of information supplied.

Finally, the new Ice Centre offers Canada a major opportunity to provide greater world leadership in operational ice programs. Originally supplying ice data to the World Meteorological Organization in Geneva, this country now offers direct advice to several countries in the development of their own ice programs. In addition to longstanding free exchanges of ice information between Canada, the United States and Greenland, there is now close cooperation with Norway, Sweden and the USSR. In addition, the Canadian Ice Service helps to make the products of high tech producers of ice monitoring and communications equipment like MacDonald Dettwiler and Telesat Canada better known around the world.

There has been an Ice Centre in Canada (either in Halifax or Ottawa) for about 30 years,



Shift supervisor Ed Becker demonstrates one of the Ice Centre's latest additions — a flight planner for coastal ice reconnaissance.

but the new Centre in downtown Ottawa is more "central" than ever. There is less pre-processing of data and most information sent in directly from the International Ice Patrol, from land observation stations and ice reconnaissance aircraft,



Jacques Colin keys in vital information at an Ice Data Integration and Analysis System (IDIAS) work station. The multi-computer system obtains ice data from many sources and creates sophisticated, accurate, on-screen maps.

receives quality processing at the Centre.

Ice Centre officials work only a few blocks from their colleagues at the Canadian Coast Guard Service, so frequent, high level meetings with their number-one client are possible.

Ottawa Weather Office Cont'd. from page 1

Besides serving around three quarters of a million people in the National Capital Region, the Ottawa weather office supplies French language weather reports by WATTS line to all French media in Ontario as well as French ATAD (recorded telephone reports) to Metropolitan Toronto.

The Ottawa office carries out 33 broadcasts a day on commercial media in both languages as well as a full Weatheradio Canada program.

Presenting the weather in clear, concise form and dealing with the general public keeps

the W04's 11 employees fully occupied much of the time. The office is open 24 hours a day, 365 days a year.

The Ottawa office's OIC Rai King says the move last fall has meant changes in the work patterns of the staff. For example, the W04 now has much less involvement with aviation, has dropped observation work completely and sees considerably more of the general public.

Being located among downtown high-rises gives the station less of a clear view of the weather and discourages "nowcasting" out of the window. On the other hand, the new office

occupies more spacious quarters with up to 20 percent more room for public reception and for bulky apparatus like the MPDS weather map enhancing equipment.

Mr. King says the move to an all-AES building is sensible and cost-effective and allows some sharing of facilities with the Ice Centre. He adds that the move is in keeping with the current tendency of AES weather offices to expand meteorological services in all economic sectors, rather than concentrating on aviation. This amounts to notable increases in public, agricultural and marine weather services.



Meteorological technician Camil Laprise gives one of his many Weatheradio Canada broadcasts from a small studio in the Ottawa Weather Office.



Enquiring members of the public feel at ease in the spacious quarters of the new Ottawa Weather Office.

ADMA "Introduces" Herself to

Nearly 300 AES employees filled the AES Downsview auditorium on a Monday morning (December 11) to cheer on colleagues who qualified for several categories of awards — from a Departmental Citation of Excellence award, to presentations to United Way canvassers. In addition, everyone welcomed the oppor-

tunity to meet the assistant deputy minister, Elizabeth Dowdeswell, appointed ADMA last August.

Ms. Dowdeswell, said that after four months she felt very much at home at AES, especially after her previous experience as chairperson of the Task Force on Level of Weather

Services several years ago.

She said she found everyone, from managers to support staff, friendly and helpful and that one of her pleasures was to occasionally wander around AES buildings "unsupervised", so as to have informal meetings with a cross section of AES staff.

She praised all AES personnel, especially the award winners, for "serving AES and the public in a dedicated and selfless manner". Referring to people who were present to receive their 35 or 25-year long service awards, Ms Dowdeswell expressed her admiration for those who had "stuck it out" for this length of time and presumed they had always been well treated by the organization.

Finally, she pointed out that now was a very exciting time to be working for AES, given the universal attention that protection of our fragile atmosphere was now enjoying and the high profile environmental priorities now in effect in the Department as a whole.

Next Ms Dowdeswell made three presentations under Environment Canada's new Citation of Excellence Awards program. The first was a departmental award to Donald Champ, Director of AES Ice Branch, whom she praised for managing AES's single largest capital program, the Ice Program, with great astuteness and negotiating ability, while at the same time achieving significant gains in productivity and staff morale.

Next, Ms Dowdeswell handed out a Service Citation of Excellence Award to Karen Anderson as accommodation officer in the Facilities section of AES (Downsview). ADMA pointed out that in 1987 Karen also took on the role of Service security officer. During this period Karen often worked late at nights or on weekends to ensure successful completion of assignments and succeeded in converting the needs of AES into realistic action plans.

The last Citation of Excellence Award was at the Inter-Directorate level and went to Larry Morrison of Experimental Studies Division of the Atmospheric Research Directorate. Larry who publishes the famous Red Book on ozone data for the entire world, was commended, for his pioneering work in promoting safe work practices at AES before the establishment of the current Health and Safety Committee.

Brenda Smith of Weather Services Directorate, Downsview, was given a Public Service Merit Award for completing her work on the Native Canadian Technical Training Course program. In cooperation with the Department of Indian and Northern Affairs, she contributed to attracting and training 16 native Canadians at the Transport Canada Training Institute in Cornwall, Ontario as well as on-the-job training in weather offices. She also organized a seminar on native culture at Downsview and a three day course for regional recruiting offices, instructors and OICs.



ADMA Elizabeth Dowdeswell (second left) stands with major award winners Larry Morrison, Karen Anderson, Brenda Smith and Don Champ.



Left of ADMA is Charles Clark, recipient of a 35-year Long Service Award, moving towards the right are four recipients of 25-Year Awards: Cal Carter, Gilles Tardif, Elwyn Park and Jean-Guy Cantin.

AES Staff at Awards Ceremonies

Ms. Dowdeswell handed out Long Service Awards to Charles Clark (35 years) and to Cal Carter, Gilles Tardif, Jean-Guy Cantin and Elwyn Park (25 years).

Finally, ADMA made presentations to four Metropolitan-Toronto area United Way canvassers, all AES employees: Ed Elliotson, Robert De Santis, Lynda Smith and Bob Jones.

Opening and closing remarks were made by Joe Boll, comptroller, Finance and Administration Branch.



Three Toronto-area canvassers for the United Way campaign are also seen with ADMA. On the left is Ed Elliotson (Material Management) and on the right are Robert de Santis (Warehouse) and Lynda Smith (Numerical Modelling Division).

AES Pacific Region Citation of Excellence Awards



From left to right: Paul Robinson, J. Keith Collins, Jack Barron, Bruce Thomson, Pat Pender (Regional director general) Elizabeth Dowdeswell (Assistant deputy minister).

October 16 and 17 marked the dates of the AMC meeting in Pacific Region. AES's new assistant deputy minister Elizabeth Dowdeswell and senior manager spent time with AES Pacific Region staff in Vancouver discussing current working challenges and a foreseeable future direction for AES.

The ADM and Regional director general Pat Pender shared the honor of awarding this year's service and Citation of Excellence Awards. J. Keith Collins of the Hope Weather Office was acknowledged for "his bravery and initiative as

a responsible citizen" (He caught thieves in the act at the Hope airport and reported the event to the authorities. Paul B. Robinson of the Kamloops Weather Office received an award for his outstanding report: "A Climatological and User Guide for the Columbia Region". Bruce Thomson (PAESS) was given a special Government of Canada Merit Award for his tremendous organizational support to the 1988 Calgary Winter Games and Jack Barron, retired OIC of the Dease Lake Weather Station, received an award for 35 years devoted service.

Poles Apart: Comparing the Polar Regions

Cold and dark in winter, cool with long hours of daylight in summer, and covered by ice and snow, the Arctic and Antarctic share a common context for many science and technology issues. Yet the two areas have very different meteorological, biological, and geographical conditions.

- The south polar region is an ice-covered continent surrounded by ocean; the north polar region is an ice-covered ocean surrounded by continents.

- For the most part, the Arctic ice cover is relatively flat and low. In contrast, Antarctica is a continent under a massive dome of ice up to 4000 metres thick.

- Summer and winter mean temperatures over the Antarctic are relatively unvarying. On a map they form a series of concentric isotherms centred east of the pole and extending beyond

60° south. In the Arctic, on the other hand, regional differences are apparent and are closely related to the alternating patterns of land and water that surround the Arctic Ocean.

- Eight nations share the circumpolar north. Seventy-five per cent of the eight million people who live in the region are citizens of the Soviet Union. In contrast, there are no permanent residents in the Antarctic but 22 nations are involved in research in the region.

- Essentially a frozen sea, the Arctic also includes a fringe of 7.6 million km² of land. Of this, 5.5 million km² is tundra and the rest is ice cover. In the Antarctic less than 3 per cent (c. 400 000 km²) of the 14 million km² of land surface is free of permanent snow and ice.

- There is a much richer plant and animal life in the far north than at comparable latitudes in

the south. For example, over 100 species of seed-bearing plants may be found on the northernmost land point of Greenland at 84° N, but only two such species grow south of 56° S.

- In Antarctica there is no terrestrial food and thus no land mammals; there are only seabirds, foraging at sea directly, scavenging, or preying on other seabird colonies. There are nine species of land mammals in the Arctic and 183 species of breeding birds; 20 species of birds breed in the Antarctic.

- There are only 11 species of insects in Antarctica. There are no wasps, beetles, or butterflies; nor are there any worms, molluscs, or spiders — all of which are important in the Arctic ecosystem.

A DAY IN THE LIFE...

Computer Analyst/Programmer/Troubleshooter



Don Cheung checking a computer program in the AES Downsview library.

It's a well-known fact that almost every office desk throughout AES now has a personal computer. The number of users and the complexity of systems is growing so rapidly that the help of competent advisors like Don Cheung (AES Downsview) is a must.

Don, the lone computer specialist in the Finance and Administration branch, has the skills and experience to perform such varied tasks as designing and writing new application programs, training users in the DOTS inter-office communications system, advising management on purchasing new equipment or acting as trouble shooter for individual PC users.

Don finds working alone in the Branch a mixed blessing. On the one hand, as a free roving computer specialist, he is able to plan his day almost as he wishes. On the other hand he sometimes finds the workload onerous. Finance and Administration is one part of AES that is automating rapidly in several different directions. That's why he may find himself at one moment working in the Material Management Division Stores, and the next up in the library helping to install a new information/management system to keep computerized track of all books and library documents.

Don's "home" terminal is a microcomputer in General Administration and here he might find himself working on any other of the programs with which the Branch is involved.

In addition to the home terminal, Don works regularly at terminals in the Records section, in Facilities and in the library. However, administrative programming is only part of his day.

Of almost equal importance is Don's work as an advisor and troubleshooter to individuals in various parts of the Downsview building. "When I first joined the Branch, I got calls from panic-stricken people whose terminals had suddenly 'blacked out'", he says. "But when I got there I often found that they had accidentally kicked the plug out." Nowadays, instead of whizzing off the minute he receives a distress call, Don asks the caller to give a few basic details about the breakdown and suggests they check right away to see if the cable is still connected. This way he saves himself some unnecessary trips.

User uncertainty doesn't just cover small things though. Don recalls the time a PC hooked up by modem to the DIALCOM corporate users' network, simply would not function. He happened to be away that day, so three or four other supposedly knowledgeable people were called in, but none of them could fix it. Next morning, Don was summoned urgently. He took one look at the wayward modem, juggled a couple of wires, and presto!, it worked.

He has been interested in computers since he was in high school and during his five years

at Toronto's York University, took several computer courses while specializing in Business Administration. (He has a BMA degree.) Before joining AES, Don and a group of friends started their own computer business. He stayed with this venture for two years. Previously he had had summer teaching experience in rehabilitation hospitals and he taught computer science at Toronto's Lyndhurst Rehabilitation Centre. (Don is himself disabled and gets around in a wheelchair.)

When he started with AES, Don began training as a Personnel officer, but his background in computers was soon discovered and he was quickly transferred to computer-oriented Finance and Administration.

Because of his business background, Don is able to advise management on purchasing data processing equipment and often sits in on meetings. In cases where the systems problem is "over his head", he can also advise on where and how to hire a consultant. He rounds out his employee assistance work with brief training sessions for individuals or small groups. He finds Downsview users range all the way from "brilliant" to "timid", but he credits most AES employees with being computer-literate.

Don insists his work is so varied, there is no typical day. But at least he is able to concoct an **imaginary** typical day. It goes something like this: "I arrive in the morning and the first thing I do is look at the notice board near my desk. There are sure to be a couple of messages asking me to go and fix a PC. If the request is really urgent I try and get it out of the way so that I can concentrate on other work later. I might go up to the third floor and work on the library system, then for about 45 minutes I might attend a meeting called by an accounting manager who wants to add a couple of new terminals to his system, but is unaware of all the implications. Before lunch I return to my desk in Facilities and pick up a couple more help-seeking messages. It's quite possible these would come from Communications Directorate or from someone in Personnel. I try and fix things within the hour. (Some days I could get up to a dozen assistance calls, which means I'm really on the go from morning till quitting time.) In the afternoon I might do some work in printing control on the main floor. At least it's a change of scenery. I usually finish the day at my own microcomputer, where I can review all the branch programs and the progress I've made towards solving them".

As far as assisting individuals goes, Don has no set beat. He can assist almost anyone anywhere in the building. And this is a part of the work he especially enjoys. "Above all else I like helping people", he explains.

AES Assists in Forest Fire Emergency

by Jeff Mann

Throughout most of June and July, a prolonged dry period had occurred across northern Saskatchewan, Manitoba and Ontario. This was heightened further in late July when a record heat wave developed, bringing the forest fire situation in northern Manitoba to a peak. By July 24, over 250 forest fires were burning. An area four times the size of Prince Edward Island was burnt. Fires reached the edge of dozens of settlements and more than 20,000 people were forced to leave northern areas. Churchill, Thompson, Winnipeg, Brandon, and the Pas became evacuation centres for those leaving their homes and belongings behind.

By late July, a state of emergency was declared, and airspace over northern communities was restricted to evacuation and fire-fighting aircraft. At first the demand for evacuations exceeded the capability of local airlines, causing airspace over communities to become choked with both smoke and aircraft. Visibilities were extremely poor and often the midday sun appeared as a dull orange disk.

The Manitoba Emergency Measures Organization decided to call in the Canadian Armed Forces (CAF), equipped with Hercules C-130 aircraft, to move the greatest number of people while at the same time reducing the total number of aircraft involved. At one point, before the arrival of the CAF, nearly every available aircraft in Thompson had been commandeered.

The terminal building at the Thompson airport became the aircraft coordinating centre during the evacuation. A CAF coordinator was flown in from Winnipeg or Trenton every 48 hours and usually worked 24-36 hour shifts directing evacuations. This work was done from both the AES Weather Office and the Flight Service Station (FSS) which are colocated.

Environment Canada (AES) provided briefings and updates for the C-130 crews and tailored terminal and area weather forecasts for the evacuation coordinators. FSS staff performed continuous flight planning and provided communications liaison between coordinators and C-130 approaches into smoked filled settlements.

At times two C-130s were making night approaches into a settlement at the same moment. At low altitude, radio contact was often lost. Many tense, silent minutes passed, leaving everyone in the office wondering if the aircraft had landed safely or if it had been able to spot the other circling aircraft in the heavy smoke. Each episode had a long period of radio silence until the loaded C-130 was airborne again, or back at sufficient altitude to inform us that it had missed its approach.

Cont'd. on page 11



A crowd of forest fire evacuees is seen boarding an aircraft at Thompson, Manitoba.



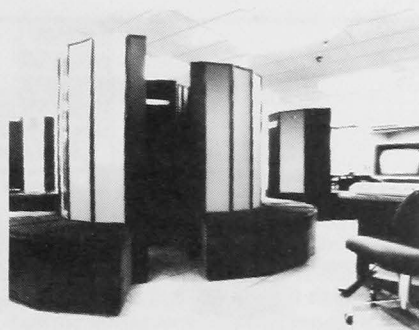
AES Atlantic Region ran a Technician Cross Training Course (March through June 1989) in order to prepare a group of presentation technicians to carry out forecasting duties at the new Atlantic Region Weather Service Office testbed. After a period of "double banking" in August-September, the graduates shared equally in the forecasting duties with a selected group of meteorologists from the Maritimes Weather Centre. They are seen, front row, left to right: Dave Mason, Mike Howe, Keith Freean, Nicole Landry, Vern Leblanc; back row Keith Keddy, Bill Stafford, Murray Forbes, Dave Hunter and Alan Blom.

New, updated CRAY now operating at CMC

A powerful new supercomputer, known as the CRAY XMP 4/16 has been installed at the Centre informatique de Dorval, part of the Canadian Meteorological Centre, and it has been fully operational since November.

The XMP 4/6 replaces the XMP 2/8 and marks the beginning of the final phase of the current AES scientific computation facilities plan which started with installation of the CRAY IS in 1983. The new installation effectively doubles both memory capacity and computing power and is scheduled to service AES for the next two years.

According to Gordon Shimizu, former director general of Central Services, now d.g. of Weather Services Directorate, increasing demands for greater computing power to implement better meteorological models and introduce new climate and air quality programs, make AES personnel aware of the need to aggressively plan for the next major update. "Action on this is already underway", concluded Mr. Shimizu.



Similar in appearance, the new CRAY XMP 416 supercomputer at the Canadian Meteorological Centre in Dorval, Quebec replaces this previous model installed there in the fall of 1986.

April 25, 1959: The Canadian icebreaker D'Iberville became the first ship to enter the St. Lawrence Seaway, as it took a group of MPs, senators, and journalists on a preview trip through the first locks. Cool, overcast weather and scattered showers dampened the fun a bit. The maximum temperature at Montreal was 18.9°.

Children greet Alert Staff

Fourteen schoolchildren aged 9-12 attending Ontario's last one-room school, located at Griffith, about 130 kilometres from Ottawa, have written to AES observers in Alert, the world's most northerly weather station, in the Northwest Territories, only 700 kilometres from the North Pole.

It happened after N.M. Bailey, their teacher at Holy Rosary School, had them read an article in the December issue of Canadian Geographic magazine, written by David Phillips of the Canadian Climate Centre on the privations suffered by the weather people, especially during the dark, icy, Christmas period. His description of High Arctic remoteness struck a chord within the children who inhabit a small community with no shopping malls, one restaurant and a single store.

Although these rural Ontario children do share a feeling of isolation with the Alert observers and displayed sympathy in their letters, they somehow overlooked the fact that the weather personnel share accommodation and amenities with some 200 members of the armed forces. They live in a complex, linked by underground passages, containing a dining room, a post office, a movie theatre, a library, a darkroom, TV and ham radio studios, a gymnasium and a bowling alley.

The kids felt even sorer for the AES

"frozen chosen" when they read that temperatures sometimes drop to as low as minus 40 C. Twelve-year-old Erin Adams asks in her letter, "What did you do when you saw your (frozen) breath in the air? I sure would get a kick out of it". She also asks if the weather people had spotted a wolf, "or a wink of Santa" (At the time the letters were written in mid-December, Griffith itself had experienced temperatures of minus 30 C.)

Despite some misconceptions about what life is really like in the Arctic, all the children realized that AES personnel in Alert would be spending Christmas and probably a long time after, separated from their families or loved ones. Accordingly, they wrote messages of good cheer and encouragement for the holiday season.

Since mail is delivered by air to Alert only once a week, the youngsters' letters arrived a little late for Christmas, but Dennis Stossel, AES's superintendent of Arctic Operations, said the children's correspondence was unique and very much appreciated by AES personnel at Alert. "Isolation is certainly part of the daily lives of all Environment Canada staff working in the Arctic", he added, "but we must also realize that people living in small rural communities like Griffith or large cities like Winnipeg can feel isolated too. The feeling of isolation is not necessarily caused by darkness, severe weather or reduced activities".

It's one of AES's more isolated postings, but surface and upper air observer Andrew Macfarlane is enjoying every minute of his stay on Sable Island, about 100 kilometres off the coast of Nova Scotia. He happens to be a wildlife specialist with a particular interest in bird watching.

Among other things, the windswept island is noted for its wild ponies, its seals and a great variety of birds, some regulars, some first-time visitors. Its sole permanent inhabitants are five AES observers, two spouses and three or four pre-school aged children, and the only transportation to the mainland is a small chartered plane once every 10 days.

Andrew who has been on Sable Island since last August, loves taking long, all-weather walks along the beaches, during which he takes bird counts, photographs wildlife and sometimes spots rare, off-course birds from as far away as Britain. Last fall, he was lucky enough to spot an Ipswich Sparrow, which uses Sable Island as its only breeding ground but winters elsewhere. During the winter he saw a robin-like European redwing, until now seen in the Western Hemisphere only on Newfoundland. The winter was colder than usual but he was able to spot a dozen different kinds of ducks on the partly frozen ponds and more than a hundred individual gulls.

Andrew had previously visited Sable Island on a wildlife survey while working as a biologist for the Canadian Wildlife Service. (Among other assignments he has spent time spotting whales in the Gulf of St. Lawrence). He joined AES in 1986 and was posted to Labrador as an observer. But he applied to go back to Sable Island, this time with his wife and two young children.

Andrew is now ready to enjoy what he considers the most interesting time of year, the spring bird season, when he can count on being surprised by the unexpected. He may well stay put in his position for another year or more, but he has to consider how Sable Island's isolation will affect his family, especially the children's education.



The sign at Alert in the North West Territories, shows the station to be located at 82.30 North and 62.20 West. It also shows that Alert is closer to London, England than it is to London, Ontario. Which ever way you look at it, Alert qualifies as a super-isolated posting.

What is the alternative for the marginal farmer in Brazil who hesitates to cut down the precious rain forest and contribute to catastrophic global climate change? Well, he could emigrate to the city and live in one of the famous squatters' colonies or favelas. According to Professor Geert Banck of Utrecht University in the Netherlands, who gave a revealing talk at Toronto's York University in November, this would not necessarily condemn the migrant to decades of pov-

erty and degradation. Prof. Banck showed slides to demonstrate that favelas gradually become respectable middle class communities with schools, churches, community centres and communications links, thanks to donations from governments, corporations, and aspiring politicians wishing to project an image of helping the poor. Swamps are drained, highways paved, supermarkets built and primitive shacks replaced by ornate "villas" as inhabitants find ways of

earning a living in the colony or by commuting to the nearby city.

Prof. Banck, said he had spent some 18 years, on and off, doing social studies in the San Pedro favela of Vittoria, about 130 kilometres north of Rio. His slides showed the colony to be in a beautiful location overlooking a tropical bay . . . a most desirable place to live!

Classical Climate Tunes

Almost everyone knows the titles of a few popular songs with weather names, say "White Christmas" or "Raindrops keep fallin' on my Head". Now, the October '89 issue of *Weatherwise* magazine reminds us in an article that much classical music has also been inspired by weather. First on the list is probably Vivaldi's **Four Seasons** and author Jim Wagner, a U.S. NOAA meteorologist, detects many weather phenomena as each season unfolds. For example he says the "hot, humid Dog Days" of summer are interrupted by a violent, lengthy thunderstorm. In the final winter movement he detects a "literal portrayal of shivering bodies and chattering teeth". (Vivaldi's native Italy was experiencing the "Little Ice Age" at the time). Franz Joseph Haydn adopted similar themes when he wrote an oratorio called "The Seasons" about a 50 years later. Probably the most dedicated weather piece was a ballet created by Russian composer Alexander Glazunov around 1900, also called "The Seasons". Mr. Wagner writes: "In the winter sections, four dancers take the part of four weather elements typical of that season: frost, ice, sleet and snow. In spring dancers portray gentle winds, birds and flowers and in summer corn and flowers as well as

much-needed water". In addition, there is a fall Bacchanale which attempts to portray spectacular autumn colors.

In addition to the above, there are many other classical pieces with weather themes and/or weather names. Robert Schumann wrote a Spring Symphony, and Tchaikovsky's first symphony bears the sub-title "Winter Dreams". Brahms wrote a "Rain sonata" for violin and piano and several composers wrote pieces inspired by Shakespeare's "The Tempest". Probably the best known 19th century weather piece is Johann Strauss Jr's: "Thunder and Lightning Polka". Finally, although it lacks a weather title, there is a section in Beethoven's **Pastoral Symphony** that displays all the elements, both physical and emotional of a violent summer storm.

The author isn't able to give many examples of North American classical weather composers. He does mention Ferde Grofe's "Grand Canyon Suite" though. Its final "cloudburst" movement in Mr. Wagner's words is "unique and physically accurate to the smallest detail in that the lightning and thunder are depicted separately".



Geoff Meek, for many years Port Meteorological officer for Ontario Region, based in Toronto, retired last fall. He began his career with the British Royal Naval Reserve, then became an officer aboard merchant ships before joining AES. At a retirement ceremony held at Toronto's Royal York Hotel September 15 over a hundred friends, fellow workers, Canadian Coast Guard representatives and shipping company officials saluted Geoff for his "direct approach" and many related anecdotes about his colorful career on the Great Lakes. In addition, letters were read praising the PMO's outstanding contribution to marine weather services.

Forest Fire Emergency Cont'd.

The courage of the C-130 crews was legendary. One of the tensest evacuations was from a place called God's Narrows. Radio communication told of flames actually on the edge of the village and of a community that had gathered on the runway in the middle of the night awaiting a C-130 to evacuate them at near-zero visibility. The pressure on aircrews, evacuees and the coordinators was enormous. For the latter this was worsened by lack of sleep and inadequate work space.

Besides maintaining their routine briefing program in Thompson, AES weather office hours were extended during the emergency to provide necessary briefings and to take some of the pressure off busy FSS staff. The CAF coordinators made use of all available work space, which was in short supply and added to the frustration of insufficient telephones. It became a daily morning exercise to step over sleeping people on the weather office floor during preparations for the upcoming day.

Once the endangered settlements were evacuated, AES involvement shifted to the fire

fighting effort. Mass weather briefings were held twice daily at the provincial Department of Natural Resources (DNR) office in downtown Thompson. DNR required regular updates on surface wind flow and forecasts as well as specifics on expected rainfall to support fire-fighting activities. Preparation for these briefings was time-consuming and at times difficult to organize — what with evacuation-related requests and regular weather office programs. The weather office would close for one or two hours. When it reopened, there would be a backlog of fax messages, evacuation requests and phone calls. These hectic afternoons would end with another mass briefing at the DNR office.

During weekends the Winnipeg and Churchill weather offices provided coverage for DNR who worked well into the night, seven days a week during the peak fire season. By mid-August, most evacuees had been returned to their homes as the forest fire danger lessened. After three weeks of hectic activity, it was a pleasure to return to normal.

Sick Building Cont'd.

Regular systems maintenance and careful selection of building materials and cleaning products could go a long way toward cleaning up the office environment. But in addition, there are indications that international standards for building ventilation are not high enough to safely dilute the harmful gases and particulates that float around office buildings. An international conference will be held in Toronto next summer; hopefully discussion will lead to more strict standards being recommended.

In the meantime, AES safety committees are urged to work with the Facilities Unit in their building to try to resolve any indoor environment problems which may be present.

John Keefe
National Safety & Health Officer

CHANGEMENT DE PERSONNEL / STAFF CHANGES

Nominations/Avancements Appointments/Promotions

D. McKay (SE-REM-2) Directeur, Politiques et planification Recherche/Director, Research Policy and Planning, ARDP, Downsview, Ont.
G. Browne (MT-6) Instructeur principal/Senior Instructor, ACTP/T, Downsview, Ont.
S. Knott (MT-6) Instructeur principal/Senior Instructor, ACTP/T, Downsview, Ont.
L. Sharron (EG-8) Instructeur superviseur/Supervising Instructor, IFTC/TCTI, Cornwall, Ont.
R. Brisson (EG-7) Instructeur spécialiste/Specialist Instructor, IFTC/TCTI, Cornwall, Ont.
M. Miller (EL-5) Techn. Entretien et instructeur/Maintenance Tech. and Instructor, IFTC/TCTI, Cornwall, Ont.
G. Paulin (MT-8) Chef, Coordination de la formation/Chief, Training Coordination, ACTR, Downsview, Ont.
C. Weber (ST-SCY-3) Secrétaire/Secretary, ACDG, Downsview, Ont.
R. Proto (CR-4) Commis/Clerk, AHRS, Downsview, Ont.
K. Moss (CR-4) Commis/Clerk, AHRO, Downsview, Ont.
D. Casale (CR-4) Commis/Clerk, AHRO, Downsview, Ont.
L. Vigneault (PE-3) Généraliste en personnel/Personnel Generalist, AHRS, Downsview, Ont.
P. Rosenblat (PE-1) Généraliste en personnel/Personnel Generalist, AHRO, Downsview, Ont.
R. Joseph (MT-5) Météorologiste/Meteorologist, PWC, Vancouver, C.-B./B.C.
H. Sheriff (CS-3) Chargé de projet/Project Leader, ACPM, Downsview, Ont.
R. Guilbault (CS-4) Planificateur principal/Senior Planner, ACPL, Downsview, Ont.
D. Lau (CS-2) Analyste, Gestion des réseaux/Network Control Analyst, ACPN, Downsview, Ont.
S. Reyhani (CS-2) Spécialiste Logiciel/Software Specialist, ACPN, Downsview, Ont.
A. Li (CS-2) Spéc., Communications/Communications Specialist, ACPX, Downsview, Ont.
R. Wiess (EG-6) Spéc. service mét./Weather Service Specialist, BM4/WO4, Calgary, Alb./Alta.
R. Porter (EG-6) Spéc. service mét./Weather Service Specialist, BM4/WO4, Calgary, Alb./Alta.
G. Pearce (EG-5) Techn. en prés./Pres. Tech., BM4/WO4, Inuvik, T.N.-O./N.W.T.
C. Holmberg (EG-6) Spéc. service mét./Weather Service Specialist, BM4/WO4, Lethbridge, Alb./Alta.
W. Romanko (EG-5) Responsable/OIC, SM2/WS2, Norman Wells, T.N.-O./N.W.T.

B. Martin (EG-7) Techn. princ. de la qualité de l'air/Sr. Air Quality Tech., ARQP, Egbert, Ont.
K. Ford (AS-1) Agent d'administration/Admin. Officer, ARQP, Downsview, Ont.
Z. Moostofa (CR-3) Commis/Clerk, AAGR, Downsview, Ont.
R. Campbell (EG-7) Agent, Normes et procédures/Data Procedures and Standards Officer, AWSC, Downsview, Ont.
R. Wagner (EG-1) Techn. en mét./Met. Tech., Sault Ste. Marie, Ont.
R. Young (EL-6) Électrotechnicien/Electronics Tech., Toronto, Ont.
F. Coronati (FI-2) Agent financier/Financial Officer, CMCA, Dorval, Qc/Que.
M. Frost (ST-SCY-2) Secrétaire/Secretary, OAEW, Toronto, Ont.
T. Kostiuk (CR-3) Commis/Clerk, Pearson Int'l. Airport, Toronto, Ont.
R. Bhushan (CS-2) Programmeur/Programmer, OAEI, Pearson Int'l. Airport, Ont.
J. G. Millar (EG-5) Techn. en mét./Met. Tech., BM4/WO4, Waterloo-Wellington, Ont.
A. Robinson (CR-3) Commis/Clerk, OAES, Toronto, Ont.
C. Wischee (GLMAM-8) Manoeuvre/General Labour, SM1/WS1, Moosonee, Ont.
S. Beauchamp (PC-2) Chimiste de l'atmosphère/Atmospheric Chemist, MAED, Bedford, N.-É./N.S.
M. Hewson (MT-6) Chef de poste/Shift Supervisor, NWC, Gander, T.-N./Nfld.
A. MacAfee (MT-6) Chef de poste/Shift Supervisor, MWC, Bedford, N.-É./N.S.
C. Coté (MT-5) Météorologiste/Meteorologist, NWC, Gander, T.-N./Nfld.
M. McCrady (MT-5) Météorologiste/Meteorologist, NWC, Gander, T.-N./Nfld.
M. Lajoie (MT-5) Météorologiste/Meteorologist, NWC, Gander, T.-N./Nfld.
J. Daigle (EG-6) Techn. en prés./Pres. Tech., NWC, Gander, T.-N./Nfld.
G. Belanger (EG-6) Techn. en prés./Pres. Tech., NWC, Gander, T.-N./Nfld.
B. Veale (MT-6) Chef de poste/Shift Supervisor, NWC, Gander, T.-N./Nfld.
L. Carter (CS-3) Agent communications/Communications Officer, Bedford, N.-É./N.S.
J. Sadubin (CS-4) Chef, Informatique et systèmes/Chief Informatics and Systems, Bedford, N.-É./N.S.
D. MacDonald-McGee Directrice/Director, Communications, SEA/AES, Downsview, Ont.

Mutations/Transfers

G. Shimizu (EX-3) Directeur général national/National Director General, AWDG, Downsview, Ont.
A. Ling (MT-3) Assist. Inst./Asst. Instructor, ACTP/T, Downsview, Ont.
E. Chan (MT-3) Assist. Inst./Asst. Instructor, ACTP/T, Downsview, Ont.
R. Ford (MT-5) Instructeur/Instructor, ACTP/T, Downsview, Ont.
J. Chapman (EG-6) Instructeur/Instructor, IFTC/TCTI, Cornwall, Ont.
P. Belanger (EG-6) Instructeur/Instructor, IFTC/TCTI, Cornwall, Ont.
N. Driedger (CS-2) Programmeur/Programmer, ACTR/O, Downsview, Ont.
M. Faucher (MT-2) Niv. perf. mét./Met. Dev. Level, PWC, Vancouver, C.-B./B.C.
D. Lundquist (MT-2) Niv. perf. mét./Met. Dev. Level, PWC, Vancouver, C.-B./B.C.
R. Hogue (MT-2) Niv. perf. mét./Met. Dev. Level, QAEM-CMQ, Saint-Laurent, Qc/Que.
M. Moreau (MT-3) Météorologiste/Meteorologist, QAEM-CMQ, Saint-Laurent, Qc/Que.
S. Martin (ST-SCY-2) Secrétaire/Secretary, QAES, Saint-Laurent, Qc/Que.
R. Lebel (EG-6) Techn. en prés./Pres. Tech., Mirabel, Qc/Que.
J. Tremblay (EG-3) Techn. en mét./Met. Tech., Centre des glaces/Ice Centre, Ottawa, Ont.
R. Kuhn (MT-2) Niv. perf. mét./Met. Dev. Level, QAEM, Pearson Int'l. Airport, Toronto, Ont.
R. Stanski (MT-6) Météorologiste/Meteorologist, QAEM, Pearson Int'l. Airport, Toronto, Ont.
G. Simard (MT-3) Météorologiste/Meteorologist, CAED, Winnipeg, Man.
R. Mackay (EG-3) Techn. en mét./Met. Tech., CCAA/Q, Downsview, Ont.
E. Moreno (ST-SCY-2) Secrétaire/Secretary, OAES, Toronto, Ont.
C. Mathieu (MT-3) Météorologiste/Meteorologist, QAEM, Montreal, Qc/Que.
R. Cormier (MT-2) Niv. perf. mét./Met. Dev. Level, Namao, C.-B./B.C.
A. Lancaster (MT-2) Niv. perf. mét./Met. Dev. Level, NWC, Gander, T.-N./Nfld.
J. Mosher (MT-2) Niv. perf. mét./Met. Dev. Level, NWC, Gander, T.-N./Nfld.
E. McIlDoon (MT-5) Météorologiste/Meteorologist, MWC, Bedford, N.-É./N.S.
K. Johnson (MT-2) Niv. perf. mét./Met. Dev. Level, MWC, Bedford, N.-É./N.S.

R. Sheppard (EG-6) Techn. en prés./Pres. Tech., BM4/WO4, Halifax, N.-É./N.S.
Y. Pelletier (MT-5) Météorologiste/Meteorologist, NWC, Gander, T.-N./Nfld.

Postes temporaires ou intérimaires/ Temporary or Acting Positions

J. Young (EX-3) Directeur General/Director General ARD, ARDG, Downsview, Ont.
G. Pearson (MT-7) Chef de section/Section Head, ACTP/T, Downsview, Ont.
G. Babin (AS-7) Suint., IFTC/TCTI/Super. Met. Training Centre, Cornwall, Ont.
M. Loiselle (SM) Chef, Formation professionnelle/Chief, Professional Training, ACTP, Downsview, Ont.
C. Iscove (DD-3) Tech., Audio-visuel/Audio Visual Tech., ACTR/A, Downsview, Ont.
N. Draper, (EG-4) Techn. en mét./Met. Tech., SM1/WS1, Vernon, C.-B./B.C.
D. Taylor (EG-2) Techn. en mét./Met. Tech., SM3/WS3, Revelstoke, C.-B./B.C.
S. Roy (MT-6) Météorologiste/Meteorologist, QAES, Saint-Laurent, Qc/Que.
N. McDuffe (PE-3) Chef, Ressources humaines/Chief, Human Resources, PAEP, Vancouver, C.-B./B.C.
J. Yim (OCE-3) Opér. trait. de textes/Word Processor Operator, ARQP/ARQD, Downsview, Ont.
L. Smith (ST-SCY-3) Secrétaire/Secretary, ARQD, Downsview, Ont.
M. Sauvé (OCE-3) Opér. trait. de textes/Word Processor Operator, AAG, Downsview, Ont.
J. Jones (CR-4) Commis/Clerk, AAL, Downsview, Ont.
S. Osborne (CR-4) Commis/Clerk, AAL, Downsview, Ont.

P. Scholefield (MT-7) Chef, int., Politiques et planification/Acting Head, Policy and Plans, AWPC, Downsview, Ont.
C. Vaneck (AS-4) Agent d'administration/Admin. Officer, AWSC, Downsview, Ont.
J. Lapierre (EG-6) Techn. en prés./Pres. Tech., Mirabel, Qc/Que.
G. Weaver (AS-2) Agent d'administration/Admin. Officer, Toronto, Ont.
E. MacIntosh (AS-1) Agent d'administration/Admin. Officer, Pearson Int'l. Airport, Toronto, Ont.
P. Chadwick (MT-6) Météorologiste/Meteorologist, OAEM, Pearson Int'l. Airport, Toronto, Ont.
L. Smith (ST-SCY-3) Secrétaire/Secretary, ARQD, Downsview, Ont.

Départs/Departures

A. Friesen, Victoria, C.-B./B.C.
J. McAlpine, AHRO, Downsview, Ont., à/to PSC, Toronto, Ont.
A. Reale, AHRO, Downsview, Ont., à/to Douanes/Customs
L. Oddi, AHRO, Downsview, Ont., à/to Transports Canada/Transport Canada
B. Metropolit, PAED, Vancouver, C.-B./B.C.
M. O'Brien (PE-3) Généraliste en personnel/Personnel Generalist, à/to Conservation et/and Protection, Burlington, Ont.
R. Fisher, WAED, Edmonton, Alb./Alta.
N. Burnett, AAL, Downsview, Ont. à/to U of T Institute for Aerospace Science, Downsview, Ont.
D. Marchand, Saint Laurent, Qc/Que., à/to Transports Canada/Transport Canada
L. Lin, Pearson Int'l. Airport, OAEM, Toronto, Ont.
R. Melihen, Pearson Int'l. Airport, OAEM, Toronto, Ont.

Congés autorisés/Leave of Absence

M. Olson, ARQD, Downsview, Ont. à/to England
J. Badger, ACTR/A, Downsview, Ont.
M. Hannah, ARQD, Downsview, Ont. Congé maternité/Maternity Leave
P. Wong, Pearson Int'l. Airport, OAEM, Toronto, Ont.
K. Ayotte, MWC, Bedford, N.-É./N.S., Congé éducation/Educational Leave

Retraites/Retirements

S. Brown, ACTP/T, Downsview, Ont., juillet/July, 1989
L. Williams, Halifax, N.-É./N.S., août/Aug., 1989
C. Georgopoulos, ACPO/IO, Downsview, Ont., oct./Oct. 1989
H. Blome, Mirabel, Qc/Que., nov./Nov., 1989
R. Puffer, BM4/WO4, Lethbridge, Alb./Alta., nov./Nov., 1989
J. Millar, Thunder Bay, Ont., nov./Nov., 1989
A. Wiggan, AHRO, Downsview, Ont., déc./Dec., 1989
A. Scott, PAED, Vancouver, C.-B./B.C., déc./Dec., 1989
G. Irwin, CMQ, Saint-Laurent, Qc/Que., déc./Dec., 1989
W. Bryans, OAEM, Toronto, Ont., déc./Dec., 1989
G. Marcella, CMC, Dorval, Qc/Que., janv./Jan., 1990